



Matt Blunt, Governor • Doyle Childers, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

APR 10 2006

Mr. Clifton Gray, General Manager
The Doe Run Company
881 Main Street
Herculaneum, MO 63048

Re: The Doe Run Company, 099-0003
Permit Number: **OP2006-011**

Dear Sir/Madam:

Enclosed with this letter is your Part 70 operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations cited in this document is necessary for continued compliance. It is very important that you read and understand the requirements contained in your permit.

As you are aware, the Environmental Protection Agency published a federal register notice on December 19, 2005 regarding the adequacy of the Missouri State Implementation Plan (SIP) for lead. If EPA finds the states and Doe Run's measures to be inadequate, the department will revise its SIP to correct the deficiencies. Depending on when this SIP revision is finalized, the department will either reopen this operating permit to incorporate any changes necessary, or handle the changes during the operating permit renewal.

If you have any questions or need additional information regarding this permit, please contact the Air Pollution Control Program (APCP) at (573) 751-4817, or you may write to the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

A handwritten signature in cursive script that reads "Michael J. Stansfield".

Michael J. Stansfield, P.E.
Operating Permit Unit Chief

MJS:jh
Enclosures

c: US EPA Region VII
St. Louis Regional Office
PAMS File: 099-0003-020





Missouri Department of Natural Resources
Air Pollution Control Program

PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth here in.

Operating Permit Number: OP2006-011

Expiration Date: April 9, 2011

Installation ID: 099-0003

Project Number: 099-0003-020

Installation Name and Address

The Doe Run Company – Smelter Division
881 Main Street
Herculaneum, MO 63048
Jefferson County

Parent Company's Name and Address

The Doe Run Resources Corporation
1801 Park 270 Drive, Suite 300
St. Louis, MO 63146

This installation is a primary lead smelter. Lead concentrates from mines, fluxes and recycled lead bearing materials from the plant are mixed and then roasted in the sinter machine. A major portion of the sulfur in the concentrate is burned to sulfur dioxide during the roasting and a majority is converted to 93 % sulfuric acid in the acid plant. The sinter and coke are fed to one or two blast furnaces where the melted furnace charge is separated into slag and bullion. The bullion goes through drossing to remove primarily copper and other metals, then the bullion is transferred to the refining kettles to remove silver and zinc. The lead is cast into lead ingots and pigs, or alloys. A variety of enclosures, baghouses, an electrostatic precipitator, scrubbers and demisters are used as control devices. The installation is a major emitter of sulfur dioxide and lead pollutants.

APR 10 2006

Effective Date

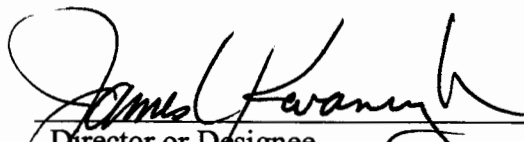

Director or Designee
Department of Natural Resources

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

This installation is a primary lead smelter. Lead concentrates from mines are received by truck and railcar. The concentrate is mixed with fluxes and recycled lead bearing materials from the plant, and is then roasted in the sinter machine. A major portion of the sulfur in the concentrate is burned to sulfur dioxide during the roasting and a majority is converted to 93 % sulfuric acid in the acid plant. The sinter and coke are fed to one or two blast furnaces. The melted furnace charge is separated into slag and bullion in the forehearth. The bullion goes through several dressing steps to remove primarily copper and other metals. The dressed bullion is transferred to the refining kettles and after silver and zinc are removed, the bullion is cast into lead ingots and pigs, or alloys. A variety of enclosures, baghouses, an electrostatic precipitator, scrubbers and demisters are used as control devices. The reported pollutant emissions for the installation in the past five years are listed below.

Reported Air Pollutant Emissions, tons per year							
Year	Particulate Matter ≤ Ten Microns (PM-10)	Sulfur Oxides (SO _x)	Nitrogen Oxides (NO _x)	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Lead (Pb)	Hazardous Air Pollutants (HAPs)
2000	154.8	28,833.4	27.76	3.35	25.07	139.80	1.51
2001	129.4	26,639.7	26.34	3.27	24.38	113.54	1.23
2002	86.6	15,223.4	21.42	2.43	21.11	58.81	0.58
2003	46.1	14,866.3	36.69	3.51	31.2	25.13	0.17
2004	25.23	16,682.0	24.34	2.72	22.46	25.95	0.23

EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation which emit air pollutants and which are identified as having unit-specific emission limitations.

Emission Unit # Description of Emission Unit

EU0010	Conveyor 21/22 transfer
EU0020	Cage Packtor
EU0030	Conveyor 24/25 Transfer and Mix Drum
EU0040	Sinter Machine, Claw Breaker and CV-39 to Sinter Storage Bins
EU0050	Sinter Crushing and Screening
EU0060	Carrier Cooler
EU0070	Cooler B/H Fume Transfer
EU0080	76" Smooth Rolls
EU0090	Blast Furnace Charge Belts
EU0100	Two Blast Furnaces and Dross Kettles
EU0110	Blast Furnace and Dross Plant Building
EU0120	12 Refinery Kettles, Casting, and # 1 Trestle Sinter Transfer to Conveyor 10
EU0130	Refinery Building
EU0140	Strip Mill
EU0150	Barge Unloading Hopper and Conveyor
EU0160	Materials Handling Building Truck Loading
EU0170	Fugitive Dust - Plant Roadways, Materials Storage and Handling Areas Fugitives, Railcar Concentrate Unloading, Railcar Fume Unloading, Sinter Plant Building Unloading, Railcar

Fume Loading from #5 B/H, Finish Sinter Railcar and Truck Loading, Concentrate Storage, Concentrate Unloading, Secondaries Storage, Secondaries Unloading, Blast Furnace Slag Storage, Blast Furnace Slag Unload, Sinter Storage, Sinter Transfer to #4 Trestle, Sinter Transfer to/from Storage Pile, Dross Loading and Unloading/Storage, Sinter Plant Mix Room Unloading and Secondaries Rail Car Loading, Sinter Machine Area Fugitives (Sinter Plant #3 B/H Roof Vent Fugitives), Furnace Area Fugitives (#5 B/H Roof Vent Fugitives), Refining and Casting Area Fugitives (Strip Mill Roof Vent Fugitives), and Fugitive Dust Plant Wide Resuspension

EU0180 Two 8- ton Silver Dross Liquation Kettles
EU0190 Silver Dross Upgrade Process
EU0200 Existing Indirect Heating Sources
EU0210 New Indirect Heating Sources
EU0220 Zep Solvent Cold Cleaners

EMISSION UNITS WITHOUT LIMITATIONS

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance.

EP043 South End Diesel Fuel Storage Tank 43, 12,000 gallon capacity
EP044 Yard Diesel Fuel Storage Tank 44, 450 gallon capacity
EP045 Yard RVP 10 Gasoline Storage Tank 45, 300 gallon capacity
EP049 Yard Diesel Fuel Storage Tank 49, 300 gallon capacity
EP052 Thawhouse Furnace Vent, pipeline natural gas fired, 5.05 MMBtu/hr
EP054 WWTP Lime Silo
EP067 Natural Gas Space Heaters, 10 MMBtu/hr

DOCUMENTS INCORPORATED BY REFERENCE

These documents have been incorporated by reference into this permit.

- 1) Construction Permit 0781-004A, Two Hot Water Boilers
- 2) Construction Permit 0386-006, Additional Roll Crusher
- 3) Construction Permit 1192-011, Redi-Mix Concrete Plant – Plant removed
- 4) Construction Permit 1098-018 and Project No. 2001-01-048, Silver Dross Upgrade Process, Induction Furnace, two Kettles and Hoppers
- 5) Construction Permit 1198-004, New Acid Plant Preheater
- 6) Construction Permit 1099-004, Lead Concentrate Barge Unloading System and Materials Building
- 7) Construction Permit 102000-028, Two, 8 ton Dross Liquidation Kettles
- 8) Construction Permit 092001-012, Coke Barge Unloading
- 9) Missouri State Implementation Plan for Doe Run-Herculaneum Primary Smelter, 2000 Revision
- 10) Attorney General CONSENT JUDGEMENT dated January 5, 2001
- 11) ADMINISTRATIVE ORDER ON CONSENT dated May 29, 2001

II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements.

Permit Condition PW001

10 CSR 10-6.220

Restriction of Emissions of Visible Air Contaminants

Emission Limitation:

1. No person shall discharge into the atmosphere from any source any visible emissions with opacity greater than 20%.
2. Exception: Sources existing on March 24, 1967 that are not incinerators and emit less than twenty-five (25) lbs/hr of particulate matter shall be limited to 40 percent (40%) opacity.
3. Exception: Visible emissions of no more than 40 percent (40%) opacity shall be allowed for a period not aggregating more than one six-minute period in any sixty (60) minutes.

Monitoring:

1. The permittee shall conduct opacity readings on this emission unit using the procedures contained in USEPA Test Method 22. Readings are only required when emission units are operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
2. The following monitoring schedule must be maintained:
 - a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then-
 - b) Observations must be made once every two weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then
 - c) Observations must be made once per month. If a violation is noted, monitoring reverts to weekly.
3. If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

Record Keeping:

1. The permittee shall maintain records of all observation results noting:
 - a) Whether any air emissions (except for water vapor) were visible from the emission units,
 - b) All emission units from which visible emissions occurred, and
 - c) Whether the visible emissions were normal for the process.
2. The permittee shall maintain records of any equipment malfunctions.
3. The permittee shall maintain records of any Method 9 opacity test performed in accordance with this permit condition.
4. Attachments A-1, A-2 and A-3 contain logs including these record keeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
5. These records shall be made available immediately for inspection to Department of Natural Resources personnel upon request.
6. All records shall be maintained for five years.

Reporting:

1. The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit.
2. Reports of any deviations from monitoring, record keeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section IV of this permit.

Permit Condition PW002

10 CSR 10-6.170

Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin

Emission Limitation:

- (a) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line or origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director;
- (b) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.
- (c) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary.

Monitoring:

- (a) The permittee shall conduct inspections of its facilities sufficient to determine compliance with this regulation. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. If a violation of this regulation is discovered, the source shall undertake corrective action to eliminate the violation.
- (b) The following monitoring schedule must be maintained:
 - (1) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then-
 - (2) Observations must be made once every two weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then-
 - (3) Observations must be made once per month. If a violation is noted, monitoring reverts to weekly.
- (c) If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

Recordkeeping:

- (a) A log must be maintained noting the following:
 - (1) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
 - (2) Whether the visible emissions were normal for the installation.
 - (3) Equipment malfunctions that could cause an exceedance of 10 CSR 10-6.170.
 - (4) Any violations of 10 CSR 10-6.170 and any corrective actions undertaken to correct the violation.

- (b) Attachment B contains a log including these record keeping requirements. This log, or an equivalent created by the permittee, must be used to certify compliance with this requirement.

Reporting:

- (a) The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition PW003

10 CSR 10-6.075

Maximum Achievable Control Technology Regulations

40 CFR part 63, subpart TTT

National Emission Standards for Hazardous Air Pollutants from Primary Lead Smelting – Test Methods

§63.1546

40 CFR part 63, subpart A

General Provisions – Performance Testing Requirements - § 63.7

40 CFR part 60, Appendix A

Appendix A to Part 60 – Test Methods

10 CSR 10-6.120

Restriction of Emissions of Lead From Specific Lead Smelter – Refinery Installations

Testing Requirements:

- (a) Table 1 of 40 CFR part 63, subpart TTT specifies the provisions of subpart A that apply and those that do not apply to owners or operators of primary lead smelters subject to 40 CFR part 63, subpart TTT. The provisions of § 63.7 apply to subpart TTT. (§ 63.1541(b))
- (b) In conducting the performance tests required in § 60.8, the permittee shall use as reference and procedures the test methods in 40 CFR part 60, Appendix A. (§ 60.186))

Test Methods – Lead Compounds:

- (a) The following procedure shall be used to determine compliance with the emissions standard for lead compounds under § 63.1543(a): (§ 63.1546(a))
- (1) The lead compound emission rate, in units of grams of lead per hour, for each source listed in § 63.1543(a)(1) through § 63.1543(a)(9) shall be determined according to the following test methods in 40 CFR part 60, Appendix A: (§ 63.1546(a)(1))
- (i) Method 1 shall be used to select the sampling port location and the number of traverse points. (§ 63.1546(a)(1)(i))
- (ii) Method 2 shall be used to measure volumetric flow rate. (§ 63.1546(a)(1)(ii))
- (iii) Method 3 shall be used for gas analysis. (§ 63.1546(a)(1)(iii))
- (iv) Method 4 shall be used to determine moisture content of the stack gas. (§ 63.1546(a)(1)(iv))
- (v) Method 12 shall be used to measure the lead emission rate of the stack gas. The minimum sample volume shall be 0.85 dry standard cubic meters (30 dry standard cubic feet) and the minimum sampling time shall be 60 minutes for each run. Three runs shall be performed and the average of the three runs shall be used to determine compliance. (§ 63.1547(a)(1)(v))
- (2) The lead production rate, in units of megagrams per hour, shall be determined based on production data for the previous 12 calendar months according to the procedures detailed in § 63.1546(a)(2)(i) through § 63.1546(a)(2)(v): (§ 63.1546(a)(2))
- (i) Total lead products production multiplied by the fractional lead content shall be determined in units of megagrams. (§ 63.1546(a)(2)(i))

- (ii) Total copper matte production multiplied by the fractional lead content shall be determined in units of megagrams. (§ 63.1546(a)(2)(ii))
- (iii) Total copper speiss production multiplied by the fractional lead content shall be determined in units of megagrams. (§ 63.1546(a)(2)(iii))
- (iv) Total lead production shall be determined by summing the values obtained in § 63.1546(a)(2)(i) through § 63.1546(a)(2)(iii). (§ 63.1546(a)(2)(iv))
- (v) The lead production rate, in units of megagrams per hour, shall be calculated based on the total lead production, as determined in accordance with § 63.1546(a)(2)(iv), divided by the total plant operating time, in hours, for the previous 12 months. (§ 63.1546(a)(2)(v))
- (3) The sum of lead compound emission rates for the sources in § 63.1543(a)(1) through § 63.1546(a)(9), as determined in accordance with § 63.1546(a)(2)(v), to obtain a production-based, lead compound emission rate in units of grams of lead per megagram of lead metal produced. The production-based lead compound emission rate shall be used to determine compliance with the emission standard for lead compounds under § 63.1543(a). (§ 63.1546(a)(3))

Test Methods – Sinter Building In-Draft:

- (a) The permittee shall perform an initial compliance test to demonstrate compliance with the sinter building in-draft requirements of § 63.1543(c) at each doorway opening in accordance with paragraphs §63.1546(b)(1) through § 63.1546(b)(4). (§ 63.1546(b))
 - (1) Use a propeller anemometer or equivalent device. (§ 63.1546(b)(1))
 - (2) Determine doorway in-draft by placing the anemometer in the plane of the doorway opening near its center. (§ 63.1546(b)(2))
 - (3) Determine doorway in-draft for each doorway that is open during normal operation with all remaining doorways in their customary position during normal operation. (§ 63.1546(b)(3))
 - (4) Do not determine doorway in-draft when ambient wind speed exceeds two meters per second. (§63.1546(b)(4))

Permit Condition PW004

10 CSR 10-6.075

Maximum Achievable Control Technology Regulations

40 CFR Part 63, Subpart TTT

National Emission Standards for Hazardous Air Pollutants from Primary Lead Smelting – Applicability

§63.1541(b)

40 CFR Part 63, Subpart A

General Provisions – Startup, Shutdown and Malfunction Plan - §63.6(e)

10 CSR 10-6.120

Restriction of Emissions of Lead From Specific Lead Smelter – Refinery Installations

10 CSR 10-6.065

Operating Permits Required – Compliance Plan Required

- (a) Compliance Plan
 - 1. The permittee is not in compliance with the requirements of §63.6(e) and 40 CFR part 63, subpart TTT to have a Startup, Shutdown and Malfunction Plan (SSMP) approved by no later than May 4, 2001.
 - 2. The permittee shall continue to develop a SSMP with guidance from the Compliance/ Enforcement Section.
 - 3. The permittee shall submit a SSMP status report on the first day of each month until plan approval.
 - 4. The SSMP is to be completed and approved by September, 30, 2006

- (b) Table 1 of 40 CFR part 63, subpart TTT specifies the provisions of subpart A that apply and those that do not apply to the permittees of primary lead smelters subject to 40 CFR part 63, subpart TTT. The provisions of § 63.6(a), (c), (e), (f), (g), (i), and (j) apply to subpart TTT. (§ 63.1541(b))
- (c) Operation and maintenance requirements. (§ 63.6(e))
 - (1) At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the permittee reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the SSMP required in § 63.6(e)(3), review of operation and maintenance records, and inspection of the source. (§63.6(e)(1)(i))
 - (2) Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the permittee must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. (§63.6(e)(1)(ii))
 - (3) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards. (§63.6(e)(1)(iii))
- (d) The permittee of an affected source must develop and implement a written SSMP that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, and air pollution control, and monitoring equipment used to comply with the relevant standard. This plan shall be developed by the permittee by the source's compliance date for 40 CFR part 63, subpart TTT. The purpose of the SSMP is to - (§63.6(e)(3)(i))
 - (1) Ensure that, at all times, the permittee operates and maintains each affected source, including associated air pollution control equipment, in a manner which satisfies the general duty to minimize emissions established by § 63.6(e)(1)(i). (§ 63.6(e)(3)(i)(A))
 - (2) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and (§ 63.6(e)(3)(i)(B))
 - (3) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation). (§ 63.6(e)(3)(i)(C))
- (e) When actions taken by the permittee during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the SSMP, the permittee must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of record keeping, that confirms conformance with the SSMP for that event. In addition the permittee shall keep records of these events as specified in §63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction operation and each malfunction of the air pollution control equipment. Furthermore, the permittee shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's SSMP in the

- semiannual (or more frequent) startup, shutdown, and malfunction report required in § 63.10(d)(5). (§ 63.6(e)(3)(iii))
- (f) If an action taken by the permittee during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the affected source's SSMP, and the source exceeds any applicable emission limitation in the relevant emission standard, then the permittee must record the actions taken for that event and must report such actions within two working days after commencing actions inconsistent with the plan, followed by a letter within seven working days after the end of the event, in accordance with § 63.10(d)(5) (unless the permittee makes alternative reporting arrangements in advance with the Director). (§ 63.6(e)(3)(iv))
- (g) The permittee must maintain at the affected source a current copy of the SSMP and must make the plan available upon request for inspection and copying by the Director. In addition, if the SSMP is subsequently revised as provided in § 63.6(e)(3)(viii), the permittee must maintain at the affected source each previous (i.e. superseded) version of the SSMP, and must make each such previous version available for inspection and copying by the Director for a period of five years after revision of the plan. If at any time after adoption of a SSMP the affected source ceases operation or is otherwise no longer subject to the provisions of this part, the permittee must retain a copy of the most recent plan for five years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the Director. The Director may at any time request in writing that the permittee submit a copy of any SSMP (or a portion thereof) which is maintained at the affected source or in the possession of the permittee. Upon receipt of such a request, the permittee must promptly submit a copy of the requested plan (or portion thereof) to the Director. The permittee may elect to submit the required copy of any SSMP to the Director in an electronic format. If the permittee claims that any portion of such a SSMP is confidential business information entitled to protection from disclosure under section 114(c) of the Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission. (§ 63.6(e)(3)(v))
- (h) To satisfy the requirements to develop a SSMP, the permittee may use the affected source's standard operating procedure (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection or submitted when requested by the Director. (§ 63.6(e)(3)(vi))
- (i) Based on the results of a determination made under § 63.6(e)(1)(i), the Director may require that the permittee of an affected source make changes to the SSMP for that source. The Director must require appropriate revisions to a SSMP, if it is found that the plan: (§ 63.6(e)(3)(vii))
- (1) Does not address a startup, shutdown, or malfunction event that has occurred; (§ 63.6(e)(3)(vii)(A))
 - (2) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by § 63.6(e)(1)(i). (§ 63.6(e)(3)(vii)(B))
 - (3) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control equipment as quickly as practicable; or (§ 63.6(e)(3)(vii)(C))
 - (4) Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in § 63.2. (§ 63.6(e)(3)(vii)(D))
- (j) The permittee may periodically revise the SSMP for the affected source as necessary to satisfy the requirements of 40 CFR part 63 or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the permittee may make such revisions to the SSMP without prior approval by the Administrator or the permitting authority. However, each such revision to a SSMP must be reported in the semi-annual report required by § 63.10(d)(5). If the SSMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSMP at the time the permittee developed the plan, the permittee shall revise the SSMP within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution

control and monitoring equipment. In the event that the permittee makes any revision to the SSMP which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the permittee has provided a written notice describing the revision to the permitting authority.

(§ 63.6(e)(3)(viii))

- (k) The title V permit for an affected source must require that the permittee develop a SSMP which conforms to the provisions of this part. However, any revisions made to the SSMP in accordance with the procedures established by this part shall not be deemed to constitute permit revisions under 40 CFR part 70 or part 71. Moreover, none of the procedures specified by the SSMP for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act. (§ 63.6(e)(3)(ix))

Permit Condition PW005

CONSENT JUDGEMENT

State Implementation Plan -December 7, 2000

ADMINISTRATIVE ORDER ON CONSENT

Resource Conservation and Recovery Act (RCRA)

Comprehensive Environmental Response Compensation and Liability Act (CERCLA)

40 CFR 50.12

National Ambient Air Quality Standard for Lead

Order:

It is therefore ordered, adjudged, and decreed that Doe Run undertake and complete, at its Herculaneum, Missouri, facility, the lead emission reduction program and schedule as specified in Section A. These control measures and the associated schedules are the reasonably available control measures to be implemented to attain the national ambient air quality standard for lead (as required by Section 172(c) of the Clean Air Act Amendments of 1990). (§2.)

Projects Required as SIP Control Measures:

1. Refinery Department Modifications (§2.A.1.)
2. Dross Plant and Refinery Dross System (§2.A.2.)
3. Blast Furnace and Dross Plant Projects (§2.A.3.)
4. Comply with the requirements of 10 CSR 10-6.075(4)(TTT). (§2.A.4.)
5. Existing Road Dust Controls (§2.A.5.)

Enforcement Measures:

1. Stack Testing: (§2.B.1.)
 - a. Compliance with the emission rates specified in 10 CSR 6.120 shall be demonstrated to MDNR by Doe Run through tests conducted in accordance with approved EPA methods.
 - b. Lead emission rates shall be determined in accordance with 10 CSR 10-6.075(4)(TTT), on a pound per 24-hour basis.
2. Notification of Completion Dates: (§2.B.2.)
 - a. Doe Run shall provide MDNR with written notification of completion of each project specified in §2.A.
3. Limitation of Hours of Operation: (§2.B.3.)
 - a. On or before July 31, 2001, and at all times thereafter, the rail car unloader shall be operated only between the hours of 6 AM and 6 PM.
 - b. On or before July 31, 2001, and at all times thereafter, the rail car unloader shall unload baghouse fume only between the hours of 2 PM and 4 PM.
4. Process Weight Limits: (§2.B.4.)

- a. Sinter plant production shall be limited to 283,920 tons of finished sinter per each calendar quarter.
 - b. Blast furnace production shall be limited to 114,005 tons of lead contained in lead-bearing material charged per each calendar quarter.
 - c. Refinery production shall be limited to 80,808 tons of metal cast per each calendar quarter.
5. Doe Run shall, to the extent consistent with this Judgement and 10 CSR 10-6.120, adhere to the “Work Practice Manual” (§2.B.5.)
6. Record Keeping: (§2.B.6.)
Doe Run shall maintain the following records for MDNR review for a minimum of 5 years following the recording of information.
- a. Doe Run shall maintain a file that states for each quarter, i) Sinter machine throughput, ii.) Blast furnace throughput, and iii.) Refined lead produced. Attachment C can be used for this purpose.
 - b. Doe Run shall maintain a file of the date, time, findings, and corrective actions taken for all baghouse inspections scheduled in the Work Practice Manual.
 - c. Doe Run shall maintain a file that records any upset operating conditions or material spills that affect lead emissions.

Pending resolution of any enforcement action initiated by MDNR, Doe Run shall maintain all pertinent records indefinitely.

7. At a minimum, Doe Run shall continue the ambient air monitoring for lead at Station 3-Dunklin High School, Station 5-Bluff, and Station 7-Broad Street in accordance with the every sixth day national monitoring schedule. Any deviations from every sixth day monitoring schedule must be approved by MDNR and EPA. Doe Run shall continue to collect meteorological data from the local meteorological station in accordance with the meteorological monitoring protocol until EPA has formally redesignated the Herculaneum Nonattainment Area as an attainment area for lead. (§2.B.7.)

The lead monitoring by Doe Run will be increased to eleven stations. The Main Street and Broad Street monitors sample daily and the other stations sample every third day.

8. Doe Run shall install a fence to preclude public access. A map showing the fencing is shown as Exhibit A in the Lead SIP. (§2.B.8.)

ADMINISTRATIVE ORDER ON CONSENT

1. The Administrative Order on Consent was entered into voluntarily by the EPA, MDNR and The Doe Run Resources Corporation on May 29, 2001. The Order requires Doe Run to conduct certain response actions as detailed in the Statement of Work to abate an imminent and substantial endangerment to the public health, welfare, or the environment that may be presented by the actual or threatened release of hazardous substances at or from the facility.
2. The Order listed seventeen plans. The AOC Statement of Work III. covers the Control Strategy, Control Strategy Implementation Schedule, and Reasonably Available Control Technology Analysis detailed below.

AOC Contingency Control Measures

1. The control strategy elements of SIP development shall be completed consistent with EPA/MDNR direction and in accordance with the following schedule: (AOC Statement of Work III.1.)
 - A. By January 1, 2001, Doe Run shall submit a Reasonably Available Control Technology analysis and control strategy, including an implementation schedule. (AOC Statement of Work III.1.A.)
 - B. By January 1, 2001, Doe Run shall submit a schedule for implementation of the following contingency control measures. (AOC Statement of Work III.1.B.)

1. Modify Cooler Baghouse dilution air intake.
 2. Modify roof monitor in the Sinter Plant Mixing Room with passive filters.
 3. Enclose railcar fume loading station at Number 5 Baghouse.
 4. Enclose North end of the railcar unloader
 5. Enclose North end of Number 1 trestle.
 6. Modify sinter machine inlet to Number 3 Baghouse.
- C. Beginning October 1, 2002, Doe Run shall initiate implementation of the additional contingency control measures described in paragraph B above. Doe Run shall implement one of the additional contingency control measures each calendar quarter until all are implemented. (AOC Statement of Work III.1.F.)
- D. In the event there is a violation of the lead standard (1.5 ug/M^3 quarterly arithmetic mean) subsequent to any time after June 30, 2002, EPA and/or MDNR will notify Doe Run of such a violation of the standard. (AOC Statement of Work III.1.G.)
- E. Upon receipt of notice that there is a violation of the quarterly lead standard, Doe Run shall implement the following contingency measures: (AOC Statement of Work III.1.H.)
1. In the event there is a violation of the quarterly lead standard prior to implementation of all additional control measures under the schedule specified in paragraph C above, within 60 days, Doe Run shall initiate implementation of all remaining control measures on the additional control measures list described in paragraph B above. (AOC Statement of Work III.1.H.1.)
 - a. In the event that there is a second violation of the quarterly lead standard following implementation of the additional control measures listed in paragraph B, above, Doe Run shall comply with one of the following: (AOC Statement of Work III.1.H.1.a.)
 1. The aggregate actual quarterly emissions from all fugitive and stack lead emission sources at the facility, except from the main stack, shall not exceed 80% of the aggregated estimated quarterly emissions from these same sources which were used to develop the control strategy referred to in paragraph A. above. The main stack is the existing 550-foot stack through which process gas streams are emitted to the atmosphere. The actual emissions shall be determined using the most current facility throughputs, and test data. The most accurate emission factors may be used where test data are not available; (AOC Statement of Work III.1.H.1.a.1.)
 2. Production of finished lead shall be limited to 50,000 short tons per quarter; or (AOC Statement of Work III.1.H.1.a.2.)
 3. Finished lead production, in tons per quarter, shall be limited to the following:

$$P = 50,000 + (500 \times (1 - A/E) \times 100)$$

Where P is finished lead production in short tons per quarter;

Where A is the aggregate actual quarterly emissions from all fugitive and stack lead emission sources at the facility except from the main stack, in tons;

Where E is the aggregate estimated quarterly emissions from all fugitive and stack lead emission sources at the facility, except from the main stack, in tons; and,

Where A/E cannot be less than 0.8 or more than 1.0.

(AOC Statement of Work III.1.H.1.a.3.)

- b. The requirement to comply with paragraph E.1.a. shall commence on the first day of the calendar quarter following receipt by EPA or MDNR of the monitoring data indicating the second violation of the quarterly lead standard. (AOC Statement of Work III.1.H.1.b.)
2. In the event that there is a violation of the quarterly lead standard which occurs after implementation of all additional controls under the schedule specified in paragraph C above, Doe Run shall comply with the requirements of paragraph E.1.a. above. The requirement to comply with paragraph E.1.a. shall

commence on the first of the calendar quarter following receipt by Doe Run of the notice from EPA and/or MDNR that there is a violation of the quarterly lead standard referred to in paragraph D. (AOC Statement of Work III.2.)

3. Doe Run shall continue to operate the facility in compliance with paragraph E.1.a. above; until such time that EPA or MDNR establishes alternative requirements through a modification to this Order, a modification to the State Implementation Plan, or an approved Maintenance Plan as part of a redesignation of the Herculaneum area to an attainment area for lead. (AOC Statement of Work III.3.)
4. (Not in AOC)
5. Within 60 days of completion of each calendar quarter in which Doe Run is required to comply with paragraph E.1.a. above, Doe Run shall submit a report indicating whether or not the requirements of E.1.a. were met for the previous quarter. This report shall include finished lead production, the most current test data and emission factors applicable to sources at the facility, sample calculations which clearly demonstrate how emission reductions were calculated, and applicable operating data, such as material throughput. The requirement to submit this report shall continue as long as Doe Run is required to operate the facility in accordance with paragraph E.1.a. (AOC Statement of Work III.5.)

NOTE: Doe Run has failed to comply with the quarterly lead standard for the first three quarters of 2005. The installation notified the APCP on September 19, 2005 that they would immediately begin implementation of contingency 2., Production of finished lead shall be limited to 50,000 short tons per quarter. Doe Run shall also comply with AOC Contingency Control Measures 3. and 5.

Nothing in this Statement of Work shall limit or preclude EPA or MDNR from taking action prescribed by the Clean Air Act regarding the National Ambient Air Quality Standards.

Stipulated Penalties:

1. For failure to develop and submit in a timely manner an original version of the following plans required pursuant to this Order, or for failure to submit a timely and adequate revised version of the following plans, stipulated penalties shall accrue in the amount of two hundred fifty dollars (\$250) per day per violation. (AOC 118.)
2. For the following activities, stipulated penalties shall accrue in the amount of one thousand two hundred fifty dollars (\$1,250) per day per violation. (AOC 119.)
 - a. Failure to fully conduct or implement an approved plan which was developed and approved pursuant to this Order. (AOC 119.1.)
 - b. Failure to install and operate the air emission controls specified in the Control Strategy (AOC 119.2.)
 - c. Failure to implement air emission contingency measures. (AOC 119.3.)
3. The stipulated penalties provisions do not preclude EPA or the MDNR from pursuing any other remedies or sanctions which are available to EPA or the MDNR because of Doe Run's failure to comply with this Order including, but not limited to, conduct of all or part of the actions by EPA or MDNR. EPA will not attempt to recover more than \$27,500 per day for stipulated penalties and statutory monetary penalties for the same violation. Payment of stipulated penalties does not alter Doe Run's obligation to complete performance under this Order. (AOC 120.)

Reporting:

The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and compliance certification to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

Permit Condition PW006

10 CSR 10-6.260

Restriction of Emission of Sulfur Compounds

Applicability:

- (a) This rule applies to any installation that is an emission source of sulfur compounds, **except** -
1. Emission sources subject to an applicable sulfur compound emission limit under 10 CSR 10-6.070; or (10 CSR 10-6.260(1)(A)1.)
 2. Combustion equipment that uses exclusively pipeline grade natural gas, or liquefied petroleum gas, or any combination of these fuels. (10 CSR 10-6.260(1)(A)2.)
- (b) Permit Condition PW006 is applicable to the sum of sulfur compound emissions from the main stack (EP059), the acid storage tanks (EP020A), the acid plant fugitive sulfur compounds (EP020B), and from the sulfuric acid loading of barges, trucks and railcars (EP199).

Emission Limitation:

- (a) The permittee shall limit sulfur dioxide emissions from the existing Herculanum smelter applicable sources to 20,000 lbs SO₂ per hour. (10 CSR 10-6.260(3)(D)1.)
- (b) The permittee shall not cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Standards.

<u>Pollutant</u>	<u>Concentration by Volume</u>	<u>Remarks</u>
a) Sulfur Dioxide (SO ₂)	0.03 parts per million (ppm)	Annual arithmetic mean
	0.14 ppm (365 micrograms per cubic meter (µg/m ³))	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 µg/m ³)	3-hour average not to be exceeded more than once per year
b) Hydrogen Sulfide (H ₂ S)	0.05 ppm (70 µg/m ³)	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 µg/m ³)	½-hour average not to be exceeded over 2 times in any 5 consecutive days
c) Sulfuric Acid (H ₂ SO ₄)	10 µg/m ³	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 µg/m ³	1-hour average not to be exceeded more than once in any 2 consecutive days

Operational Limits:

- (a) Electrostatic precipitator (ESP) shall operate with three of the five fields on line.
- (b) The ESP normal operating temperature range shall be maintained between 400 to 600 °F.
- (c) The acid plant venturi scrubber liquid temperature shall be maintained between 150 to 200 °F.
- (d) The first pass in the acid plant converter should be 700 °F or higher within an hour. Preheat is used until 760 °F is met.

- (e) Normal pressures in the acid plant system;

Control Device #	Inlet (" H ₂ O)	Outlet (" H ₂ O)
Venturi Scrubber CD-16	-11.0	-17.0
Mist Precipitators CD-18	-24.6	-26.6
Demister Pads CD-19	-34	-38
Demister Pads CD-21	12.2	0.5

Operational Limitation/Equipment Specifications:

- (a) The permittee will operate the control devices, (ESP) and the acid plant; to aid in meeting the particulate emission limit for this source and to insure proper operation of the acid plant. The control devices are normally required to be in service and operational when sinter plant is operating. Exception: Except as defined in 10 CSR 10-6.050, Start-Up, Shutdown, and Malfunction Conditions.” Operation of the control device must be maintained using standard manufacturer recommendations and Good Engineering Practices (GEP).
- (b) An operation and maintenance plan shall be developed in accordance with manufacturer specifications for the ESP.

Monitoring:

- (a) The ESP inlet temperature readings are monitored in the Sinter Plant control room and there are alarm lights in the ESP control room.
- (b) The acid plant control device pressure readings and the converter temperature shall be monitored each operating shift.
- (c) For particulate matter periodic monitoring compliance, the permittee shall monitor three specific parameters that can be used to indicate the ESP’s performance. The permittee shall monitor the primary and secondary voltage, primary and secondary current and number of fields on line once each shift when the unit is on line.
- (d) The permittee makes a commitment to take timely corrective action during periods of excursions where the indicators of the electrostatic precipitator performance are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return the operation within the indicator range. An excursion is determined by the average discreet data point over a period of time, or the presence of a monitored abnormal condition. An excursion does not indicate a violation of an applicable requirement. ESP parameters alone, are not prima facie evidence of a violation but may be used with other information to establish a violation of a particulate matter limitation.
- (e) Inspection of the rapper operation, T-R set operation, inspection of the ash removal system are required to be included in the operation and maintenance plan. Corrective action measures will be implemented on the occurrence of an abnormal condition. Abnormal conditions will include the following: a T-R set failure, rapper system failure, ash transport system failure. Random T-R system failure and rapper failure (up to two T-R sets and 20% of the rappers) will not significantly affect precipitator performance.
- (f) Each major unit overhaul shall be defined in the maintenance plan to include the checking and correct plate electrode alignment, the inspection of the condition collection surface fouling, the mechanical condition of the T-R set and the inspection of the internal structural components. Corrective action procedures will be devised and implemented on the occurrence of an abnormal condition. The appropriate measures for remediation will be implemented in a timely manner.
- (g) Compliance with 10 CSR 10-6.260(3)(D)1. shall be determined by source testing as specified in subsection (5)(B) of this rule except the source testing shall consist of averaging three (3) separate one (1)-hour tests using the applicable test method. (10 CSR 10-6.260(3)(D)2.)

Test Method:

- (a) Source testing to determine compliance shall be done as specified in 10 CSR 10-6.0309(6).
(10 CSR 10-6.260(5)(B))

Record Keeping:

- (a) The ESP temperature and operating parameters shall be recorded on each operating shift. Attachment J, or a similar form can be used for this purpose.
- (b) The acid plant control device pressure readings and the converter temperature shall be recorded each operating shift on Attachment K or a similar form can be used for this purpose.
- (c) The permittee shall maintain a written or electronic copy of all inspections and any action resulting from the inspection.
- (d) All instrument calibrations shall be recorded.
- (e) Maintain a spare parts inventory by a computerized inventory or other Administrator approved management system.
- (f) The permittee shall maintain records of any monitoring or control equipment malfunctions.
- (g) All records shall be maintained for five years. These records shall be made available immediately for inspection to the Department of Natural Resources' personnel upon request.

Reporting:

- (a) The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the emission limitation(s) and/or operating parameter range listed above.
- (b) Reports of any deviations from monitoring other than the operating parameter range, record keeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section IV of this permit.
- (c) The permittee shall furnish the director such data as s/he may reasonably require to determine whether compliance is being met. (10 CSR 10-6.260(3)(D)4.)

Permit Condition PW007

10 CSR 10-6.075

Maximum Achievable Control Technology Regulations

40 CFR part 63, subpart TTT

National Emission Standards for Hazardous Air Pollutants for Primary Lead Smelting

40 CFR part 63, subpart A

General Provisions

Implementation and Enforcement Authority:

- (b) The EPA has delegated implementation and enforcement authority of 40 CFR part 63, subpart TTT to the Missouri Department of Natural Resources except for the following authorities. (§§ 63.1550(b) and (c))
- (1) Approval of alternatives to the requirements in §§ 63.1541, 63.1543(a) through (c), (f) through (g), and 63.1544 through 63.1545. (§ 63.1550(c)(1))
- (2) Approval of major alternatives to test methods under §§ 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart. (§ 63.1550(c)(2))
- (3) Approval of major alternatives to monitoring under § 63.8(f), as defined in § 63.90, and as required in this subpart. (§ 63.1550(c)(3))
- (4) Approval of major alternatives to record keeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart. (§ 63.1550(c)(4))

III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements.

EU0010			
Sinter Plant Process and Process Fugitive Emissions			
General Description:	Conveyor 21 Transfer to Conveyor 22, 135 ton/hr new feed	EQ Ref. # (2003)	Emissions
Control Device:	Custom Systems TD64-8 Baghouse, CD35	EU022B	B/H CD35 EP059

EU0020			
Sinter Plant Process and Process Fugitive Emissions			
General Description:	Sinter Plant Cage Packtor, Misc. Belts, 270 tons mixed feed/hr	EQ Ref. # (2003)	Emissions
Manufacturer:	Gundlach; 75-2c4E-131, 1967	EU028	B/H CD31 EP059
Sinter Returns Bin	150-Ton Sinter Bin (top)		
Conveyor 24 Tail End	Conveyor 23 Discharge to Cage Packtor		
Conveyor 36 Upper Middle	Cage Packtor		
Conveyor 36 Transfer to 150-Ton Sinter Bin			

EU0030			
Sinter Plant Process and Process Fugitive Emissions			
General Description:	Mix Sinter Feed and Convey , 270 tons mixed feed/hr	EQ Ref. # (2003)	Emissions
Manufacturer:	Allis Chalmers, 1967	EU024 EU058	B/H CD34 EP059
Mix Drum	Conveyor 24 transfer to Conveyor 25		

EU0040			
Sinter Plant Process and Process Fugitive Emissions			
General Description:	Sinter Machine and Claw Breaker, 73 ton/hr concentrate, pipeline natural gas, 33.6 MMBtu/hr , Sinter conveyor 39 to storage	EQ Ref. # (2003)	Emissions
Manufacturer:	McDonnell-Wellman, F-S306-H, 1964	EU013A & 13B EU027A	ESP CD11 #3B/H CD13 Acid Plant CD12 EP059
Sinter Machine	Claw Breaker		
Conveyor 39 Finished Sinter to Blast Furnace Storage Bins, 135 ton/hr			

EU0050			
Sinter Plant Process and Process Fugitive Emissions			
General Description:	Sinter Crushing and Screening, 270 tons/hr	EQ Ref. # (2003)	Emissions
Manufacturer:	Baghouse CD29, Research-Cottrell, 1990	EU027A	B/H CD29 EP059
Feeder 10	Undersized Sinter Corrugated Rolls		
Ross live Rolls	Euromag Conveyor Transfer		
Conveyor 29 and 29A	Euromag Conveyor		
Conveyor 38	Euromag		

EU0060			
Sinter Plant Process Emissions			
General Description:	Feed Conveyor to Carrier Cooler, Carrier Cooler, and Cooler Transfer to CV36, 135 ton/hr	EQ Ref. # (2003)	Emissions
Control Device:	B/H Research-Cottrell, 120-wmwc, 1990	EU027B	B/H CD30 EP059

EU0070 Sinter Plant Process Emissions			
General Description:	Cooler Baghouse Fume Transfer to #10 Bin, 50 ton/hr	EQ Ref. # (2003)	Emissions
		EU026	B/H CD28 EP059

EU0080 Sinter Plant Process and Process Fugitive Emissions			
General Description:	Undersized Sinter Smooth Roll Crushing, 135 ton/hr	EQ Ref. # (2003)	Emissions
Manufacturer:	McLanahan, 1986		
Conveyor 37A Transfer to Smooth Rolls	Conveyor 23 Middle	EU022	B/H CD23 EP059
76" Smooth Rolls	Smooth Roll B/H Transfer to Conveyor 23		
Conveyor 37B Transfer to Conveyor 23	#3 B/H Transfer to Conveyor 23		

EU0090 Blast Furnace Process Emissions			
General Description:	Blast Furnace Feed Floor Charge Belts	EQ Ref. # (2003)	Emissions
		EU013C	#6 B/H, CD15 EP059

EU0100 Blast Furnace and Dross Plant Process Emissions			
General Description:	Two Blast Furnaces, 73 tons/hr of concentrate Four 250 ton Drossing Kettles, 47 ton/hr	EQ Ref. # (2003)	Emissions
			#5 B/H, CD14 EP059
Manufacturer/Model #:	St. Joe Lead Co., 1965	EU013C	

EU0110 Blast Furnace and Dross Plant Building Emissions			
General Description:	Blast Furnace and Dross Plant Building	EQ Ref. # (2003)	Emissions
Manufacturer/Model #:	St. Joe Lead Co., 1965		
		EU015B	#7 B/H, CD37 EP015B

EU0120 Refinery Kettles Process Emissions and Sinter Transfer			
General Description:	12, 250 ton Refining Kettles, Lead Casting, 163 ton/hr	EQ Ref. # (2003)	Emissions
	#1 Trestle Sinter transfer to CV10, 100 ton/hr		
Manufacturer/Model #:	St. Joe Lead Co., 1960	EU019	#8B/H CD38 EP019E

EU0130 Refinery Building Emissions			
General Description:	12, 250 ton Refining Kettles and Lead Casting, 163 ton/hr	EQ Ref. # (2003)	Emissions
Manufacturer/Model #:	St. Joe Lead Co., 1960		
		EU019	#9B/H CD36 EP019D

EU0140

Strip Mill Process Emissions

General Description:	Two Strip Mill Kettles, No. 41 and 42, 10 ton/hr	EQ Ref. #	Emissions
Manufacturer/Model #:	St. Joe Lead Co., 1979	(2003)	B/H CD25
		EU023	EP023

EU0150

Lead Concentrate and Coke Barge Unloading

General Description:	Barge Unloader	Unload Hopper, 180 ton/hr	EQ Ref. #	Emissions
Manufacturer/Model #:	Doe Run, 1999		(2003)	B/H CD65A
			EU065B	EP065A

EU0160

Materials Handling Building Process Emissions

General Description:	Conveyor, 180 ton/hr	Truck Loading Building	EQ Ref. #	Emissions
Manufacturer/Model #:	Doe Run, 1999		(2003)	B/H CD65B
			EU065C, D	EP065B

Permit Condition (EU0010 through EU0160)-001

10 CSR 10-6.075

Maximum Achievable Control Technology Regulations

40 CFR part 63, subpart TTT

National Emission Standards for Hazardous Air Pollutants from Primary Lead Smelting – Process Emissions and Process Fugitive Emissions

40 CFR part 63, subpart A

General Provisions

10 CSR 10-6.120

Restriction of Emissions of Lead From Specific Lead Smelter-Refinery Installations

40 CFR part 60, Appendix B

Performance Specifications – Performance Specification 1

Applicability:

- The provisions of 40 CFR part 63, subpart TTT apply to the following affected sources at primary lead smelters: sinter machine, blast furnace, dross furnace, process fugitive sources, and fugitive dust sources. The provisions of this subpart do not apply to secondary lead smelters, lead refiners, or lead remelters. (§ 63.1541(a))
- The provisions of 10 CSR 10-6.120 applies to existing installations engaged in specific smelting and refining for the production of lead. (6.120(1)(A))

Definitions:

Terms used in this subpart are defined in the Act, in § 63.2, or in 40 CFR part 63, subpart TTT. (§ 63.1542)

- Dross furnace* means any smelting furnace to which drosses are charged and which chemically and physically separates lead from other impurities.
- Drossing and refining kettle* means an open-top vessel that is constructed of cast iron or steel and is heated from below and contains molten lead for the purpose of drossing, refining, or alloying lead. Included are pot furnaces, receiving kettles, and holding kettles.
- Plant operating time* means the period of time in hours that either a sinter machine or blast furnace is in operation.

- (d.) *Process fugitive source* means a source of hazardous air pollutant emissions at a primary lead smelter that is associated with lead smelting or refining but is not the primary exhaust stream and is not a fugitive dust source. Process fugitive sources include sinter machine charging locations, sinter machine discharge locations, sinter crushing and sizing equipment, furnace charging locations, furnace taps, drossing kettles, and refining kettles.

Emission Limitation Standards for Process and Process Fugitive Sources:

- (a) No permittee of any existing, new, or reconstructed primary lead smelter shall discharge or cause to be discharged into the atmosphere lead compounds in excess of 500 grams of lead per megagram of lead metal produced (1.0 pounds of lead per ton of lead metal produced) from the aggregation of emissions discharged from the air pollution control devices used to control emissions from the sources listed in § 63.1543(a)(1) through § 63.1543(a)(9). (EU0010 through EU0100) (§ 63.1543(a))
1. Sinter machine; (§ 63.1543(a)(1))
 2. Blast furnace; (§ 63.1543(a)(2))
 3. Dross furnace; (§ 63.1543(a)(3))
 4. Dross furnace charging location; (§ 63.1543(a)(4))
 5. Blast furnace and dross furnace tapping location; (§ 63.1543(a)(5))
 6. Sinter machine charging location; (§ 63.1543(a)(6))
 7. Sinter machine discharge end; (§ 63.1543(a)(7))
 8. Sinter crushing and sizing equipment; and (§ 63.1543(a)(8))
 9. Sinter machine area. (§ 63.1543(a)(9))
- (b) The process fugitive sources listed in §§ 63.1543(a)(4) through (a)(8) shall be equipped with a hood and shall be ventilated to a baghouse or equivalent control device. The hood design and ventilation rate shall be consistent with American Conference of Governmental Hygienists recommended practices. (§ 63.1543(b))
- (c) The sinter machine area shall be enclosed in a building that is ventilated to a baghouse or equivalent control device at a rate that maintains a positive in-draft through any doorway opening. (§ 63.1543(c))
- (d) Except as provided in § 63.1543(e), following the initial test to demonstrate compliance with paragraph § 63.1543(a), the permittee of a primary lead smelter shall conduct a compliance test for lead compounds on an annual basis (no later than 12 calendar months following the previous compliance test). (§63.1543(d))
- (e) If the three most recent compliance tests demonstrate compliance with the emission limit specified in §63.1543(a), the permittee of a primary lead smelter shall be allowed up to 24 calendar months from the previous compliance test to conduct the next annual compliance test for lead compounds. (§ 63.1543(e))
- (f) The permittee of a primary lead smelter shall maintain and operate each baghouse used to control emissions from the sources listed in 40 CFR part 63, subpart TTT, §§ 63.1543(a)(1) through (a)(9) such that the alarm on a bag leak detection system required under § 63.1547(c)(9) does not sound for more than five percent of the total operating time in a six-month reporting period. (§ 63.1543(f))
- (g) The permittee of a primary lead smelter shall record the date and time of a bag leak detection system alarm and initiate procedures to determine the cause of the alarm according to the corrective action plan required under § 63.1547(c)(9) within one hour of the alarm. The cause of the alarm shall be corrected as soon as practicable. (§ 63.1543(g))
- (h) The Doe Run Primary Lead Smelter-Refinery installation in Herculaneum, Missouri shall limit lead emissions into the atmosphere to the allowable amount as shown in Table II. (10 CSR 10-6.120(2)(B))

Table II

Main Stack,	EU0010 through EU0100	794 pounds lead per 24 hours
No. 7 and 9 Baghouse Stack,	EU0110 and EU0130	56.6 pounds lead per 24 hours
No. 8 Baghouse Stack,	EU0120	8.2 pounds lead per 24 hours

Compliance Date:

- (a) The permittee of an existing primary lead smelter shall achieve compliance with 40 CFR part 63, subpart TTT no later than May 4, 2001. (§ 63.1545(a))
- (b) Except as provided in section 112 of the Act, the compliance date established for an existing source will not exceed three years after the effective date of such standard (§63.6(c))

Testing Requirements:

The permittee must comply with Permit Condition PW003, Testing Requirements.

Test Methods:

- (a) The permittee must comply with Permit Condition PW003, Test Methods Lead Compounds for 40 CFR part 63, subpart TTT. (§ 63.1546(a))
- (b) The permittee must comply with Permit Condition PW003, Test Methods Lead Compounds (1) and Test Methods-Opacity for 10 CSR 10-6.120(1)(C)1. and 2.

Monitoring Requirements:

Table 1 of 40 CFR part 63, subpart TTT specifies the provisions of subpart A that apply and those that do not apply to owners or operators of primary lead smelters subject to 40 CFR part 63, subpart TTT. The provisions of § 63.8 apply to subpart TTT. (§ 63.1541(b))

- (a) Baghouse/Fabric Filter: Owners and operators of primary lead smelters shall prepare, and at all times operate according to, a standard operating procedures manual that describes in detail procedures for inspection, maintenance, and bag leak detection and corrective action plans for all baghouses (fabric filters) that are used to control process, process fugitive, or fugitive dust emissions from any source subject to the lead emission standards in §§ 63.1543 and 63.1544, including those used to control emissions from general ventilation systems. (§ 63.1547(a)) The Baghouse S.O.P. Plan is located in Attachment F of this permit, and is applicable to the baghouses in EU0010 through EU0160.
- (b) The standard operating procedures manual for baghouses required by § 63.1547(a) shall be submitted to the Administrator or delegated authority for review and approval. (§ 63.1547(b))
- (c) The procedures specified in the standard operating procedures manual for inspections and routine maintenance shall, at a minimum, include the requirements of §§ 63.1547(c)(1) through (c)(9) of this section. (§ 63.1547(c))
 - 1. Daily monitoring of pressure drop across each baghouse cell to insure pressure drop is within the normal operating range identified in the standard operating procedures manual. (§ 63.1547(c)(1)) The pressure drop shall be recorded on Attachment G or an equivalent form.
 - 2. Weekly confirmation that dust is being removed from hoppers through visual inspection, or equivalent means of ensuring the proper functioning of removal mechanisms. (§ 63.1547(c)(2))
 - 3. Daily check of compressed air supply for pulse-jet baghouses. (§ 63.1547(c)(3))
 - 4. Appropriate methodology for monitoring cleaning cycles to ensure proper operation. (§ 63.1547(c)(4))
 - 5. Monthly check of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means. (§ 63.1547(c)(5))
 - 6. Quarterly check of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (knead or bent) or laying on their sides. Such checks are not required for shaker-type baghouses using self-tensioning (spring loaded) devices. (§ 63.1547(c)(6))
 - 7. Quarterly confirmation of the physical integrity of the baghouse through visual inspection of the baghouse interior for air leaks. (§ 63.1547(c)(7))
 - 8. Quarterly inspection of fans for wear, material buildup, and corrosion through visual inspection, vibration detectors, or equivalent means. (§ 63.1547(c)(8))

9. Except as provided in § 63.1547(h), continuous operation of a bag leak detection system for EU0010 through EU0160. (§ 63.1547(c)(9))
- (d) The procedures specified in the standard operating procedures manual for maintenance shall, at a minimum, include a preventative maintenance schedule that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance. (§63.1547(d))
- (e) The bag leak detection system required by § 63.1547(c)(9) shall meet the specifications and requirements of §§ 63.1547(e)(1) through (e)(8). (§ 63.1547(e))
 1. The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligram per actual cubic meter (0.0044 grains per actual cubic foot) or less. (§ 63.1547(e)(1))
 2. The bag leak detection system sensor must provide output of relative particulate matter loadings, and the permittee shall continuously record the output from the bag leak detection system. (§63.1547(e)(2))
 3. The bag leak detection system must be equipped with an alarm system that will sound when an increase in relative particulate loading is detected over a preset level, and the alarm must be located such that it can be heard by the appropriate plant personnel. (§ 63.1547(e)(3))
 4. Each bag leak detection system that works based on the triboelectric effect shall be installed, calibrated, and maintained in a manner consistent with guidance provided in the U.S. Environmental Protection Agency guidance document "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015). Other bag leak detection systems shall be installed, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations. (§ 63.1547(e)(4))
 5. The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time. (§ 63.1547(e)(5))
 6. Following initial adjustment, the permittee shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the approved SOP required under §63.1547(a). In no event shall the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies that the baghouse has been inspected and found in good operating condition. (§ 63.1547(e)(6))
 7. For negative pressure, induced air baghouses and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector must be installed downstream of the baghouse and upstream of any wet acid gas scrubber. (§ 63.1547(e)(7))
 8. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. (§ 63.1547(e)(8))
- (f) The standard operating procedures manual required by paragraph § 63.1547(a) shall include a corrective action plan that specifies the procedures to be followed in the case of a bag leak detection system alarm. The corrective action plan shall include, at a minimum, procedures to be used to determine the cause of the alarm, as well as actions to be taken to minimize emissions, which may include, but are not limited to, the following. (§ 63.1547(f))
 1. Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions. (§ 63.1547(f)(1))
 2. Sealing off defective bags or filter media. (§ 63.1547(f)(2))
 3. Replacing defective bags or filter media, or otherwise repairing the control device. (§ 63.1547(f)(3))
 4. Sealing off a defective baghouse compartment. (§ 63.1548(f)(4))
 5. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system. (§ 63.1547(f)(5))
 6. Shutting down the process producing the particulate emissions. (§ 63.1547(f)(6))
- (g) The percentage of total operating time the alarm on the bag leak detection system sounds in a 6-month reporting period shall be calculated in order to determine compliance with the five percent operating limit

- in § 63.1543(f). The percentage of time the alarm on the bag leak detection system sounds shall be determined according to § 63.1547(g)(1) through (g)(5). (§ 63.1547(g))
1. Alarms that occur due solely to a malfunction of the bag leak detection system shall not be included in the calculation. (§ 63.1547(g)(1))
 2. Alarms that occur during startup, shutdown, or malfunction shall not be included in the calculation if the condition is described in the startup, shutdown, and malfunction plan and the permittee operates the source during such periods in accordance with § 63.6(e). (§ 63.1547(g)(2))
 3. For each alarm where the permittee initiates procedures to determine the cause of the alarm within 1 hour of the alarm, 1 hour of alarm time shall be counted. (§ 63.1547(g)(3))
 4. For each alarm where the permittee does not initiate procedures to determine the cause of the alarm within 1 hour of the alarm, alarm time will be counted as the actual amount of time taken by the permittee to initiate procedures to determine the cause of the alarm. (§ 63.1547(g)(4))
 5. The percentage of time the alarm on the bag leak detection system sounds shall be calculated as the ratio of the sum of alarm times to the total operating time multiplied by 100. (§ 63.1547(g)(5))
- (h) The permittee shall monitor sinter machine building in-draft to demonstrate continued compliance with the operating standard specified in § 63.1543(c) in accordance with §§ 63.1547(i)(1), (i)(2), or (i)(3). (§63.1547(i))
1. The permittee shall check and record on a daily basis doorway in-draft at each doorway in accordance with the methodology specified in § 63.1546(b). (§ 63.1547(i)(1))
 2. The permittee shall establish and maintain baseline ventilation parameters that result in a positive in-draft according to § 63.1547(i)(2)(i) through § 63.1547(i)(2)(iv). (§ 63.1547(i)(2))
 - (i) The permittee shall install, calibrate, maintain, and operate a monitoring device that continuously records the actual volumetric flow rate through each separately ducted hood; or install, calibrate, maintain, and operate a monitoring device that continuously records the volumetric flow rate at the control device inlet of each exhaust system ventilating the building. The flow rate monitoring device(s) can be installed in any location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of plus or minus 10 percent over its normal operating range and shall be calibrated according to manufacturer's instructions. (§ 63.1547(i)(2)(i))
 - (ii) During the initial demonstration of sinter building in-draft, and at any time the permittee wishes to re-establish the baseline ventilation parameters, the permittee shall continuously record the volumetric flow rate through each separately ducted hood, or continuously record the volumetric flow rate at the control device inlet of each exhaust system ventilating the building and record exhaust system damper positions. The permittee shall determine the average volumetric flow rate(s) corresponding to the period of time the in-draft compliance determinations are being conducted. (§ 63.1547(i)(2)(ii))
 - (iii) The permittee shall maintain the volumetric flow rate(s) at or above the value(s) established during the most recent in-draft determination at all times the sinter machine is in operation. Volumetric flow rate(s) shall be calculated as a 15-minute average. (§ 63.1547(i)(2)(iii))
 - (iv) If the volumetric flow rate is monitored at the control device inlet, the permittee shall check and record damper positions daily to ensure they are in the positions they were in during the most recent in-draft determination. (§ 63.1547(i)(2)(iv))
 3. The permittee may request an alternative monitoring method by following the procedures and requirements in § 63.8(f) of the General Provisions. (§ 63.1547(i)(3))

Recordkeeping:

- (a) The permittee of a primary lead smelter shall comply with all of the recordkeeping requirements of § 63.10 of subpart A, General Provisions. (§ 63.1549(a))

- (b) In addition to the general records required by § 63.1549(a), each permittee of a primary lead smelter shall maintain for a period of five years, records of the following information. (§ 63.1549(b))
1. Production records of the weight and lead content of lead products, copper matte, and copper speiss. (§ 63.1549(b)(1))
 2. Records of the bag leak detection system output. (§ 63.1549(b)(2))
 3. An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, and the date and time the cause of the alarm was corrected. (§ 63.1549(b)(3))
 4. Any recordkeeping required as part of the practices described in the standard operating procedures manual required under § 63.1544(a) for the control of fugitive dust emissions. (§ 63.1549(b)(4))
 5. Any recordkeeping required as part of the practices described in the standard operating procedures manual for baghouses required under § 63.1547(a). (§ 63.1549(b)(5))
 6. If the permittee chooses to demonstrate continuous compliance with the sinter building in-draft requirement under § 63.1543(c) by employing the method allowed in (§ 63.1546(i)(1), the records of the daily doorway in-draft checks, an identification of the periods when there was not a positive in-draft, and an explanation of the corrective actions taken. (§ 63.1549(b)(6))
 7. If the permittee chooses to demonstrate continuous compliance with the sinter building in-draft requirement under § 63.1543(c) by employing the method allowed in (§ 63.1546(i)(2), the records of the output from the continuous volumetric flow monitor(s), an identification of the periods when the 15-minute volumetric flow rate dropped below the minimum established during the most recent in-draft determination, and an explanation of the corrective action taken. (§ 63.1549(b)(7))
 8. If the permittee chooses to demonstrate continuous compliance with the sinter building in-draft requirement under § 63.1543(c) by employing the method allowed in (§ 63.1546(i)(2), and volumetric flow rate is monitored at the baghouse inlet, records of the daily checks of damper positions, an identification of the days that the damper positions were not in the positions established during the most recent in-draft determination, and an explanation of the corrective action taken. (§ 63.1549(b)(8))
- (c) Records for the most recent two years of operation must be maintained on site. Records for the previous three years may be maintained off site. (§ 63.1549(c))

Reporting:

- (a) The permittee of a primary lead smelter shall comply with all of the reporting requirements of § 63.10 of subpart A, General Provisions. (§ 63.1549(d))
- (b) In addition to the information required under § 63.10 of the General Provisions, the permittee shall provide semi-annual reports containing the information specified in § 63.1549(e)(1) through (7) to the Director. (§ 63.1549(e))
1. The reports shall include records of all alarms from the bag leak detection system specified in §63.1547(e). (§ 63.1549(e)(1))
 2. The reports shall include a description of the actions taken following each bag leak detection system alarm pursuant to § 63.1547(f). (§ 63.1549(e)(2))
 3. The reports shall include a calculation of the percentage of time the alarm on the bag leak detection system sounded during the reporting period pursuant to § 63.1547(g). (§ 63.1549(e)(3))
 4. If the permittee chooses to demonstrate continuous compliance with the sinter building in-draft requirement under § 63.1543(c) by employing the method allowed in § 63.1546(i)(1), the reports shall contain an identification of the periods when there was not a positive in-draft, and an explanation of the corrective actions taken. (§ 63.1549(e)(4))
 5. If the permittee chooses to demonstrate continuous compliance with the sinter building in-draft requirement under § 63.1543(c) by employing the method allowed in § 63.1546(i)(2), the reports shall contain an identification of the periods when the 15-minute volumetric flow rate(s) dropped below the

minimum established during the most recent in-draft determination, and an explanation of the corrective actions taken. (§ 63.1549(e)(5))

6. If the permittee chooses to demonstrate continuous compliance with the sinter building in-draft requirement under § 63.1543(c) by employing the method allowed in § 63.1546(i)(2), and volumetric flow rate is monitored at the baghouse inlet, the reports shall contain an identification of the days that the damper positions were not in the positions established during the most recent in-draft determination, and an explanation of the corrective actions taken. (§ 63.1549(e)(6))
7. The reports shall contain a summary of the records maintained as part of the practices described in the standard operating procedures for baghouses required under § 63.1547(a), including an explanation of the periods when the procedures were not followed and the corrective actions taken. (§ 63.1549(e)(7))

Permit Condition EU0010-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the CV-21/CV-22 transfer system in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 54.3 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0020-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the cage paktor and sinter returns bin in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 66.5 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0030-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the mix drum and CV-24/CV-25 transfer system in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 69.9 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0040-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the sinter plant, claw breaker and CV-39 in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 61.8 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0050-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the sinter crusher and screening system in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 61.8 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0060-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the carrier cooler in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 54.3 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0070-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the #10 bin in excess of that allowed by the formula $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 44.6 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0080 -002

10 CSR 10-6.070

New Source Performance Regulations

40 CFR part 60, subpart R

Standards of Performance for Primary Lead Smelters

10 CSR 10-6.220

Restriction of Emission of Visible Air Contaminants

40 CFR part 63, subpart A

General Provisions

40 CFR part 60, Appendix A

Appendix A to Part 60 – Test Methods - § 60.8

40 CFR part 60, Appendix B

Performance Specification 1

Applicability:

- (a) The provisions of 40 CFR part 60, subpart R is applicable to the sintering machine discharge end smooth rolls. (§ 60.180(a))
- (b) Any facility under § 60.180 (a) that commences construction or modification after October 16, 1974, is subject to the requirements of 40 CFR part 60, subpart R. (§ 60.180(b))
- (c) The sinter machine discharge end smooth rolls shall have a COMS installed, calibrated, maintained and operated in accordance with 40 CFR part 60, Performance Specification 1: (10 CSR 10-6.220(3)(E))
 - 1. Sources that require COMS under 10 CSR 10-6.070 NSPS. (10 CSR 10-6.220(3)(E)(3.))

Definitions:

- (a) *Sintering machine discharge end* means any apparatus, which receives sinter as it is discharged from the conveying grate of a sintering machine. (§ 60.181(d))

Emission Limitations:

- (a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no permittee subject to 40 CFR part 60, subpart R shall cause to be discharged into the atmosphere from the sintering machine discharge end any gases that contain particulate matter in excess of 50 mg/dscm (0.022 gr/dscf). (§ 60.182(a))
- (b) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no permittee subject to 40 CFR part 60, subpart R shall cause to be discharged into the atmosphere from the sintering machine discharge end any gases that exhibit greater than 20 percent opacity. (§ 60.184(a))

Monitoring and Recordkeeping:

- (a) The permittee of any primary lead smelter subject to the provisions of 40 CFR part 60, subpart R shall install and operate: (§ 60.185(a))
 - 1. A continuous opacity monitoring system (COMS) to monitor and record the opacity of gases discharged into the atmosphere from the sintering machine discharge end. The span of this system shall be set at 80 to 100 percent opacity. (§60.185(a)(1))
- (b) All COMS for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. (§ 60.13(e)(1))
 - 1. Source operating time includes any time fuel is being combusted and/or a fan is being operated. (10 CSR 10-6.220(H)1.)

2. Records shall be maintained of all information reported in the quarterly summaries and all six-minute opacity averages and daily Quality Assurance (QA)/ Quality Control (QC) records. (10 CSR 10-6.220(4)(B)1. and 2.)
- (c) The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Test Methods and Procedures:

- (a) In conducting the performance tests required in § 60.8, the permittee shall use as reference and procedures the test methods in 40 CFR part 60, Appendix A. (§ 60.186(a))
- (b) The permittee shall determine compliance with the particulate matter and visible emission standards in §§60.182, and 60.184 as follows: (§ 60.186(b))
 1. Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm. (30 dscf) (§ 60.186(b)(1))
 2. Method 9 and the procedures in § 60.11 shall be used to determine opacity. (§ 60.186(b)(3))

Reporting:

- (a) The permittee required to install COMS shall submit a quarterly written report to the Director. The report shall be post-marked no later than the thirtieth day following the end of each calendar quarter, and shall include the following emissions data: (10 CSR 10-6.220(4)(A))
 1. A summary including total time for each cause of excess emissions and/or monitor downtime; (10 CSR 10-6.220(4)(A)1.)
 2. Nature and cause of excess emissions, if known; (10 CSR 10-6.220(4)(A)2.)
 3. The six-minute average opacity values greater than the opacity emission requirements (The average of the values shall be obtained by using the procedures specified in the Reference Method used to determine the opacity of the visible emissions); ((10 CSR 10-6.220(4)(A)3.)
 4. The date and time identifying each period during which the COMS was inoperative (except for zero and span checks), including the nature and frequency of system repairs or adjustments that were made during these times; and (10 CSR 10-6.220(4)(A)4.)
 5. If no excess emissions have occurred during the reporting period and the COMS has not been inoperative, repaired or adjusted, this information shall be stated in the report. (10 CSR 10-6.220(4)(A)5.)

Permit Condition EU0090-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the blast furnace charge belts in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 48.2 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0100-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the blast furnaces and drossing kettles in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 59.7 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0110-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the blast furnace and dross building in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 44.6 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0120-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the refinery kettles and sinter transfer to CV-10 in excess of that allowed by the formula; $PM\ lb/hr = 55.0 P^{0.11} - 40$. The limit for the process is 61.5 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment D, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition EU0130-002

10 CSR 10-6.400

Restriction of Emissions of Particulate Matter From Industrial Processes

Emission Limitations:

1. Particulate matter shall not be emitted from the refinery building in excess of that allowed by the formula;
 $PM \text{ lb/hr} = 55.0 P^{0.11} - 40$. The limit for the process is 56.3 lb PM/hr.
2. The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring/Recordkeeping:

The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Reporting:

The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition (EU0150 and EU0160)-002

10 CSR 10-6.060

Construction Permit Required – Construction Permit No-1099-004

Emission Limitation:

- (a) Condition No.1. The permittee shall emit into the atmosphere from the lead concentrate barge unloading equipment less than 0.6 tons of lead (Pb) in any 12-month rolling average.

Monitoring:

- (a) Condition No. 4. The baghouses must be in use at all times when EU0150 or EU0160 are in operation.
- (b) Condition No. 6. The permittee shall conduct stack performance testing to verify 90 % capture efficiency and 99% control efficiency for the baghouses.
- (c) The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Record keeping:

- (a) Condition No. 2. The permittee shall maintain the monthly and the sum of the most recent consecutive 12-month records of the lead emissions from operation of the equipment. Attachment H or an equivalent form can be used to demonstrate compliance with Condition No. 1. The records shall be maintained for 5 years and shall be made available for inspection to the Missouri Department of Natural Resources (DNR) upon request.

Reporting:

- (a) Condition No. 3. The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which monthly Lead Tracking Records (Condition No. 2.) indicate that the permittee has exceeded the limitation of Condition No. 1., or

any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of the regulation.

Permit Condition (EU0150 and EU0160)-003

10 CSR 10-6.400

Restriction of Emission of Particulate Matter from Industrial Processes

10 CSR 10-6.060

Construction Permit Required – Construction Permit No. 092001-012

10 CSR 10-6.065

Operating Permits – Reasonably Anticipated Operating Scenarios

Anticipated Operating Scenario:

- (a) Permit Condition (EU0150 and EU0160)-003 is applicable when coke is being unloaded from a barge.
- (b) The permittee is authorized to change to the alternative operating scenario without notice by recording in a log at the installation the scenario under which it is operating contemporaneous with changing from one operating scenario to another.

Emission Limitation:

- (a) Particulate matter shall not be emitted from EU0150 or EU0160 in excess of that allowed by the formula;
 $PM\ lb/hr = 55P^{0.11} - 40$. The limit for each system is 54.7 lb PM/hr.
- (b) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

Monitoring:

- (a) Condition No. 1. The baghouses must be in use at all times when EU0150 or EU0160 are in operation.
- (b) The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Record keeping:

- (a) The records shall be maintained for 5 years and shall be made available for inspection to the Missouri Department of Natural Resources (DNR) upon request.
- (b) The permittee shall record the change to an alternate operating scenario on Attachment I, or an equivalent form created by the permittee.

Reporting:

- (a) The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of the regulation.

EU0170
Plant Fugitive Dust

Plant Roadways, Sinter Machine Area Fugitives, Furnace Area Fugitives, Refining and Casting Area Fugitives and Materials Storage and Handling Areas Fugitives

General Description:	EQ Ref. #	General Description	EQ Ref #
Railcar Concentrate Unloading	EP001-A	Secondaries Unloading	EP055B
Railcar Fume Unloading	EP001-B	Blast Furnace Slag Storage	EP056
Sintering Plant Building	EP006	Blast Furnace Slag Unloading	EP056B
#3 B/H Roof Vent Fugitives	EP014	Sinter Storage	EP057
#5 B/H Roof Vent Fugitives	EP017	Sinter Transfer to #4 Trestle	EP057B
Fume Loading	EP017B	Sinter Transfer to/from Storage	EP057C
Finish Sinter RR & Truck Loadout	EP021	Dross Loading and Unload/ Storage	EP058
Strip Mill Roof Vents	EP023B	#1 Trestle Transfer to CV-10	EP060
Concentrate Storage	EP050	Sinter Plant Mix Room Unloading	EP061
Concentrate Unloading	EP051	Secondaries Railcar Loading	EP062
Secondaries Storage	EP055	Plant Wide Resuspension	EP199B

Permit Condition EU0170-001

10 CSR 10-6.075

Maximum Achievable Control Technology Regulations

40 CFR part 63, subpart TTT

National Emission Standards for Hazardous Air Pollutants from Primary Lead Smelting – Fugitive Emissions

40 CFR part 63, subpart A

General Provisions

10 CSR 10-6.120

Restriction of Emissions of Lead From Specific Lead Smelter-Refinery Installations

Definition:

Terms used in this subpart are defined in the Act, in § 63.2, or in 40 CFR part 63, subpart TTT. (§ 63.1542)

- (a) *Fugitive dust source* means a stationary source of hazardous air pollutant emissions at a primary lead smelter resulting from the handling, storage, transfer, or other management of lead bearing materials where the source is not associated with a specific process, process vent, or stack. Fugitive dust sources include roadways, storage piles, materials handling transfer points, and material transport areas.

Standards for Fugitive Dust Sources:

- (a) Each permittee of a primary lead smelter shall prepare, and at all times operate according to, a standard operating procedures manual that describes in detail the measures that will be put in place to control fugitive dust emissions from the sources listed in §§ 63.1544(a)(1) through (a)(5). (§ 63.1544(a))
- (1) Plant roadways; (§ 63.1544(a)(1))
 - (2) Material storage and handling area(s); (§ 63.1544(a)(2))
 - (3) Sinter machine area(s); (§ 63.1544(a)(3))
 - (4) Furnace area(s); and (§ 63.1544(a)(4))
 - (5) Refining and casting area(s). (§ 63.1544(a)(5))
- (b) Notwithstanding § 63.1544(c), the standard operating procedures manual shall be submitted to the APCP for review and approval. (§ 63.1544(b))
- (c) Existing manuals that describe the measures in place to control fugitive dust sources required, as part of a State Implementation Plan for lead, shall satisfy the requirements of § 63.1544(a) provided they address the sources listed in §§ 63.1544(a)(1) through (a)(5). (§ 63.1544(c))

Notification Requirements:

- (a) The permittee of a primary lead smelter shall comply with all of the notification requirements of 40 CFR part 63, subpart A, General Provisions, §63.9. (§ 63.1548(a))
- (b) The permittee of a primary lead smelter shall submit the fugitive dust control standard operating procedures manual required under § 63.1544(a) to the Director along with a notification that the smelter is seeking review and approval of the plan and procedures. The permittee of an existing primary lead smelter shall submit this notification no later than November 6, 2000. (§ 63.1548(b))

Monitoring:

The work practice manual, Attachment J, shall be the method of determining compliance with the fugitive dust standards. (10 CSR 10-6.120(3)(B)2.

Recordkeeping:

- (a) The permittee of a primary lead smelter shall comply with all of the record keeping requirements of 40 CFR part 63, subpart A, General Provisions, § 63.10. (§ 63.1549(a))
- (b) In addition to the general records required by § 63.1549(a), the permittee of a primary lead smelter shall maintain for a period of five years, any records required as part of the practices described in the standard operating procedures manual under § 63.1544(a) for the control of fugitive dust emissions. (§63.1549(b)(4))
- (c) The permittee shall keep daily records of the fugitive dust control measures performed to demonstrate compliance with the standard operating procedures manual required under § 63.1544(a). (§ 63.1549(e)(8))
- (d) The work practice manual shall contain the requirement that records of inspection made by the operator of fugitive emissions control equipment such as hoods, air ducts and exhaust fans be maintained by the operator. 10 CSR 10-6.120(3)(C)2.
- (e) Records for the most recent two years of operation must be maintained on site. Records for the previous 3 years may be maintained off site. (§ 63.1549(c))

Reporting:

- (a) The permittee of a primary lead smelter shall comply with all of the reporting requirements of 40 CFR part 63, subpart A, General Provisions, § 63.10. (§ 63.1549(d))
- (b) In addition to the information required under § 63.10, of the General Provisions, the permittee shall provide semi-annual reports containing a summary of the fugitive dust control measures performed during the required reporting period, including an explanation of any periods when the procedures outlined in the standard operating procedures manual were not followed and the corrective action taken. The reports shall not contain copies of the daily records required to demonstrate compliance with the requirements of the standard operating procedures manual required under § 63.1544(a). (§ 63.1549(e)(8))
- (c) Any change to the manual proposed by the permittee following the initial approval shall be requested in writing to the Director. Any proposed change shall demonstrate that the change in the work practice will not lessen the effectiveness of the fugitive emission reductions for the work practice involved. Written approval by the Director is required before any change becomes effective in the manual. (10 CSR 10-6.120(3)(B)3.)
- (d) If the Director determines a change in the work practice manual is necessary, the Director will notify the permittee of that installation. The permittee shall revise the manual to reflect these changes and submit the revised manual within 30 days of receipt of notification. These changes shall become effective following written approval of the revised manual by the Director. (10 CSR 10-6.120(3)(B)4.)
- (e) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section IV of this permit.

EU0180			
Silver Dross Process			
General Description:	Two Silver Dross Kettles, 8 ton capacity, 0.84 ton/hr, 2000	EIQ Ref. # (2003)	Emissions
Manufacturer/Model #:	North American, 4442-4		B/H CD66 EP066

Permit Condition EU0180-001
10 CSR 10-6.060
Construction Permit Required – Construction Permit No. 102000-028

Emission Limitation:

- (a) The permittee shall emit into the atmosphere from the silver dross process less than 0.6 tons of lead in any 12 consecutive month period.

Equipment and Operation Limitation:

- (a) Condition 1. The permittee shall control emissions from the silver dross process with a baghouse. The baghouse shall be equipped with instruments to monitor the operating pressure drop across the baghouse.

Monitoring:

- (a) The permittee shall determine the monthly and the 12 consecutive month total of lead emissions.
(b) The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Recordkeeping:

- (a) The permittee shall use Attachment K or an equivalent form to record the monthly and 12 consecutive month total of lead emissions.
(b) The records shall be maintained on-site for five years and be made available for inspection to the Missouri Department of Natural Resources' upon request.

Reporting:

- (a) The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of the regulation.

EU0190			
Silver Dross Upgrading Process			
General Description: Induction Furnace, 0.189 tons/hr, 1998		EIQ Ref. # (2003)	Emissions
Manufacturer/Model #: InductoTherm, VIP Power Trak, Fischer, MNP 600			
Induction Furnace	Two Hoppers	EU063	B/H, CD63 EP063
Two Kettles	Bench Caster		

Permit Condition EU0190-001
10 CSR 10-6.060
Construction Permit Required – Project No. 2001-01-048

Emission Limitation:

- (a) Condition 1. The permittee shall emit into the atmosphere from EU0190 less than 0.6 tons of lead in any 12-consecutive months.

Monitoring:

- (a) Condition 2. The permittee shall maintain the monthly and the 12 consecutive month totals of lead emissions from EU0190.
- (b) Condition 4. The Teflon membrane fabric filter baghouse must be in use at all times when the associated equipment is in operation.
- (c) The permittee shall comply with the requirements of Attachment F, the Baghouse SOP.

Performance Testing:

- (a) Condition 5. The permittee shall conduct performance testing to demonstrate compliance with Condition 1. This includes the emission rates, the capture and the removal efficiencies of the baghouse.

Record keeping:

- (a) Condition 2. The permittee shall use Attachment L or an equivalent form to demonstrate compliance with Condition 1. The monthly lead emissions shall be the sum calculated from the silver dross upgrading operations. The records shall be maintained on-site for five years and be made available for inspection to the Missouri Department of Natural Resources' upon request.

Reporting:

- (a) Condition No. 3. The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which monthly Lead Tracking Records (Condition No. 2.) indicate that the permittee has exceeded the limitation of Condition No. 1., or any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of the regulation.

EU0200		
Existing Pipeline Natural Gas Fired Indirect Heating Sources		
General Description:	MMBtu/hr	EQ Reference # (2003):
12 Refining Kettle burners, 1967	60.48 MMBtu/hr total	EP029 - 038
2 Dross Kettle burners, 1965	10.08 MMBtu/hr total	EP039 - 040
Office Boiler	2.84 MMBtu/hr	EP046

Permit Condition EU0200-001

10 CSR 10-5.030

Maximum Allowable Emissions of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

Emission Limitation:

- (a) The permittee shall not emit particulate matter in excess of 0.36 pounds per million BTU of heat input from any of the listed existing indirect heating sources.
- (b) The permittee shall only burn pipeline natural gas fuel in any of the listed existing indirect heating sources.

Monitoring/Record Keeping/Reporting:

- (b) The permittee shall maintain a copy of the Statement of Basis on-site to demonstrate that none of the existing indirect heating emission units are emitting particulate matter in excess of 0.36 lbs/MMBtu.
- (b) The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

EU0210

New Pipeline Natural Gas Fired Indirect Heating Sources

General Description:	MMBtu/hr	EQ Reference # (2003):
2 Strip Mill Kettle burners, 1979	10.08 MMBtu/hr total	EP041 – 042
2 Change House Boilers, 1981	10.92 MMBtu/hr total	EP047 – 048
Low Alpha Smelting System, 1998	2.94 MMBtu/hr	EP063
Acid Plant Preheater, 1998	5.88 MMBtu/hr	EP064
Silver Dross Liquation Kettles, 2000	3.36 MMBtu/hr	EP066

Permit Condition EU0210-001

10 CSR 10-5.030

Maximum Allowable Emissions of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

Emission Limitation:

- (a) The permittee shall not emit particulate matter in excess of 0.20 pounds per million BTU of heat input from any of the listed new indirect heating sources.
- (b) The permittee shall only burn pipeline natural gas fuel in any of the listed new indirect heating sources.

Monitoring/Record Keeping/Reporting:

- (a) The permittee shall maintain a copy of the Statement of Basis on-site to demonstrate that none of the new indirect heating emission units are emitting particulate matter in excess of 0.20 lbs/MMBtu.
- (b) The permittee shall report to the APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

EU0220

Zep Solvent Cold Cleaners

General Description:	Four cold cleaning units
Manufacturer/Model #:	Zep DYNA 143, Light Aliphatic Naphtha, Vapor Pressure 0.5 mmHg at 20 °C
EQ Reference # (2003):	

Permit Condition EU0220-001

10 CSR 10-5.300

Control of Emissions from Solvent Metal Cleaning

Emission Limitation:

1. After April 1, 2001, no owner or operator shall operate a cold cleaner using a solvent with a vapor pressure greater than 1.0 mm Hg at 20 degrees Celsius.
2. Exception: The permittee may use an alternative method for reducing cold cleaning emissions if the level of emission control is equivalent to or greater than the requirements listed above. The director must approve the alternative method.

Equipment and Operation Parameters:

1. Each cold cleaner shall have a cover which will prevent the escape of solvent vapors from the solvent bath while in the closed position, or the cold cleaner shall have an enclosed reservoir which limits the escape of solvent vapors from the solvent bath whenever parts are not being processed in the cleaner.

2. When one or more of the following conditions exist, the design of the cover shall be such that it can be easily operated with one hand and without disturbing the solvent vapors in the tank (For covers larger than ten square feet, this shall be accomplished by either mechanical assistance such as spring loading or counter weighing or by power systems):
 - a) The solvent volatility is greater than 0.3 psi measured at 37.8 Celsius (37.8 °C) (100 degrees Fahrenheit (100 °F)), such as in mineral spirits.
 - b) The solvent is agitated; or
 - c) The solvent is heated.
3. Each cold cleaner shall have a drainage facility that will be internal so that parts are enclosed under the cover while draining.
1. If an internal drainage facility cannot fit into the cleaning system and the solvent vapor pressure is less than 0.6 psi measured at 37.8 °C (100 °F), then the cold cleaner shall have an external drainage facility which provides for the solvent to drain back into the solvent bath.
5. Solvent sprays, if used, shall be a solid fluid stream (not fine, atomized, of shower type spray) and at a pressure which does not cause splashing above or beyond the freeboard.
6. A permanent conspicuous label summarizing the operating procedures shall be affixed to the equipment.
7. Any cold cleaner which uses a solvent volatility greater than 0.6 psi measured at 37.8 °C (100°F) or heated above 48.9 °C (120°F) must use one of the following control devices:
 - a) A freeboard ratio of at least 0.75;
 - b) Water cover (solvent must be insoluble in and heavier than water); or
 - c) Other control systems with a mass balance demonstrated overall VOC emissions reduction efficiency greater than or equal to 65 percent (65%). These control systems must receive approval from the director prior to their use.
8. Each cold cleaner shall be operated as follows:
 - a) Cold cleaner covers shall be closed whenever parts are not being handled in the cleaners or the solvent must drain into an enclosed reservoir.
 - b) Clean parts shall be drained in the freeboard area for at least 15 seconds or until dripping ceases, whichever is longer.
 - c) Whenever a cold cleaner fails to perform within the operating parameters established for it by this regulation, the unit shall be shut down immediately and shall remain shut down until trained service personnel are able to restore operation within the established parameters.
 - d) Solvent leaks shall be repaired immediately or the degreaser shall be shut down until the leaks are repaired.
 - e) Any waste material removed from a cold cleaner shall be disposed of by one of the following methods and in accordance with the Missouri Hazardous Waste Management Commission rules codified at 10 CSR 10-25, as applicable:
 - i) Reduction of the waste material to less than 20 percent (20%) VOC solvent by distillation and proper disposal of the still bottom waste, or
 - ii) Stored in closed containers for transfer to a contract reclamation service or a disposal facility approved by the director.
 - iii) Waste solvent shall be stored in covered containers only.
9. Operators must be trained as follows:
 - a) Only persons trained in at least the operational and equipment requirements specified in this regulation for their particular solvent metal cleaning process shall be permitted to operate the equipment,
 - b) The supervisor of any person who operates a solvent metal cleaning process shall receive equal or greater operational training than the operator,
 - c) Refresher training shall be given to all solvent metal cleaning equipment operators at least once each 12 month period.

Monitoring:

The permittee shall monitor the throughputs of the solvents monthly and maintain material safety data sheets of the cleanup solvents used at the installation.

Record Keeping:

1. The permittee shall maintain the following records for each purchase of cold cleaner solvent. (see Attachment M):
 - a) The name and address of the solvent supplier;
 - b) The date of purchase;
 - c) The type of solvent; and
 - d) The vapor pressure of the solvent in mm Hg at 20°C (68°F).
2. The permittee shall keep monthly inventory records of solvent types and amounts purchased and solvent consumed. The records shall include all types and amounts of solvent containing waste material transferred to either a contract reclamation service or to a disposal installation and all amounts distilled on the premises (see Attachment N). The record also shall include logs of the maintenance and repairs to the cold cleaners. (see Attachment O).
3. Records shall be maintained of all solvent metal cleaning training for each employee on an annual basis (see Attachment P).
4. All records shall be maintained for five years.

Reporting:

Reports of any deviation from or exceedance of any of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation shall be submitted semi-annually, in the semi-annual monitoring report and annual compliance certification, as required by Section IV of this permit..

IV. Core Permit Requirements

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements.

10 CSR 10-6.050, *Start-up, Shutdown and Malfunction Conditions*

- (a.) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days in writing the following information:
- (1.) Name and location of installation;
 - (2.) Name and telephone number of person responsible for the installation;
 - (3.) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
 - (4.) Identity of the equipment causing the excess emissions;
 - (5.) Time and duration of the period of excess emissions;
 - (6.) Cause of the excess emissions;
 - (7.) Air pollutants involved;
 - (8.) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
 - (9.) Measures taken to mitigate the extent and duration of the excess emissions; and
 - (10.) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- (b.) The permittee shall submit the paragraph (a.) information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
- (c.) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph (a.) list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.
- (d.) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- (e.) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060, *Construction Permits Required*

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

10 CSR 10-6.065, Operating Permits

The permittee shall file for renewal of this operating permit no sooner than eighteen months, nor later than six months, prior to the expiration date of this operating permit. The permittee shall retain the most current operating permit issued to this installation on-site and shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request.

10 CSR 10-6.110, Submission of Emission Data, Emission Fees and Process Information

- (a.) The permittee shall complete and submit an Emission Inventory Questionnaire (EIQ) in accordance with the requirements outlined in this rule.
- (b.) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079 to satisfy the requirements of the Federal Clean Air Act, Title V.
- (c.) The fees shall be due April 1 each year for emissions produced during the previous calendar year. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the Emissions Inventory Questionnaire (EIQ) form or equivalent approved by the director.

10 CSR 10-6.130, Controlling Emissions During Episodes of High Air Pollution Potential

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

10 CSR 10-6.150, Circumvention

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

10 CSR 10-6.180, Measurement of Emissions of Air Contaminants

- (a.) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.
- (b.) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- (c.) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-5.040, Use of Fuel in Hand-Fired Equipment Prohibited

It shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area. This regulation shall apply to all fuel-burning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, nor to fires used for recreational purpose, nor to fires used solely for the preparation of food by barbecuing. Hand-fired fuel-burning equipment is any stove, furnace, or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

10 CSR 10-5.060, Refuse Not to be Burned in Fuel Burning Installations (Contained in State Implementation Plan)

No person shall burn or cause or permit the burning of refuse in any installation, which is designed for the primary purpose of burning fuel.

10 CSR 10-5.120, Information on Sales of Fuels to be Provided and Maintained

Every delivery of coal or residual fuel oil when first delivered to a consumer or wholesaler in the St. Louis metropolitan area must be accompanied by a ticket prepared in triplicate and containing at least the name and address of the seller and the buyer; the grade of fuel; ash content of coal, the source of the fuel, which must be an approved source, and such other information as the Air Conservation Commission may require. One copy of each ticket shall be kept by the person delivering the fuel and be retained for one year; one copy is to be given to the recipient of the fuel to be retained for one year; and, upon request, within 30 days after delivery of the fuel, the delivering party shall mail one copy to the Air Conservation Commission.

10 CSR 10-5.070, Open Burning Restrictions

- (a.) The permittee shall not conduct, cause, permit or allow a salvage operation, the disposal of trade wastes or burning of refuse by open burning.
- (b.) Exception - Open burning of trade waste or vegetation may be permitted only when it can be shown that open burning is the only feasible method of disposal or an emergency exists which requires open burning.
- (c.) Any person intending to engage in open burning shall file a request to do so with the director. The request shall include the following:
 - (1.) The name, address and telephone number of the person submitting the application; The type of business or activity involved; A description of the proposed equipment and operating practices, the type, quantity and composition of trade wastes and expected composition and amount of air contaminants to be released to the atmosphere where known;
 - (2.) The schedule of burning operations;
 - (3.) The exact location where open burning will be used to dispose of the trade wastes;
 - (4.) Reasons why no method other than open burning is feasible; and
 - (5.) Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction.
- (d.) Upon approval of the open burning permit application by the director, the person may proceed with the operation under the terms of the open burning permit. Be aware that such approval shall not exempt The Doe Run Company from the provisions of any other law, ordinance or regulation.
- (e.) The permittee shall maintain files with letters from the director approving the open burning operation and previous DNR inspection reports.

10 CSR 10-5.160, Control of Odors in the Ambient Air

No person shall emit odorous matter as to cause an objectionable odor on or adjacent to:

- (a.) Residential, recreational, institutional, retail sales, hotel or educational premises.
- (b.) Industrial premises when air containing odorous matter is diluted with 20 or more volumes of odor-free air; or
- (c.) Premises other than those in paragraphs (1)A.1. and (2) of the rule when air containing odorous matter is diluted with four or more volumes of odor-free air.

The previously mentioned requirement shall apply only to objectionable odors. An odor will be deemed objectionable when 30% or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy; the sample size to be at least 20 people or 75% of those exposed if fewer than 20 people are exposed.

This requirement is not federally enforceable.

10 CSR 10-5.240, Additional Air Quality Control Measures May be Required When Sources Are Clustered in a Small Land Area

The Air Conservation Commission may prescribe more restrictive air quality control requirements that are more restrictive and more extensive than provided in regulations of general application for:

- (a.) Areas in which there are one or more existing sources and/or proposed new sources of particulate matter in any circular area with a diameter of two miles (including sources outside metropolitan area) from which the sum of particulate emissions allowed from these sources by regulations of general application are or would be greater than 2000 tons per year or 500 pounds per hour.
- (b.) Areas in which there are one or more existing sources and/or proposed new sources of sulfur dioxide in any circular area with a diameter of two miles from which the sum of sulfur dioxide emissions from these sources allowed by regulations of general application are or would be greater than 1000 tons for any consecutive three months or 1000 pounds per hour.

10 CSR 10-5.250, Time Schedule for Compliance

Except as otherwise specified, all new installations shall comply with the provisions of this regulation as of going into operation.

10 CSR 10-6.100, Alternate Emission Limits

Proposals for alternate emission limitations shall be submitted on Alternate Emission Limits Permit forms provided by the department. An installation owner or operator must obtain an Alternate Emission Limits Permit in accordance with 10 CSR 10-6.100 before alternate emission limits may become effective.

10 CSR 10-6.080, Emission Standards for Hazardous Air Pollutants

40 CFR Part 61 Subpart M, National Emission Standard for Asbestos

- (a) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
- (b) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.250, Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

Title VI – 40 CFR Part 82, Protection of Stratospheric Ozone

- (a.) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - (1.) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
 - (2.) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - (3.) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
 - (4.) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- (b.) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
 - (1.) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - (2.) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
 - (3.) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - (4.) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. (“MVAC-like” appliance as defined at §82.152).
 - (5.) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
 - (6.) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- (c.) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
- (d.) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR part 82*

10 CSR 10-6.280, Compliance Monitoring Usage

- a) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
 - 1) Monitoring methods outlined in 40 CFR Part 64;
 - 2) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, “Operating Permits”, and incorporated into an operating permit; and

- 3) Any other monitoring methods approved by the director.
- b) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
 - 1) Monitoring methods outlined in 40 CFR Part 64;
 - 2) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, “Operating Permits”, and incorporated into an operating permit; and
 - 3) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- c) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
 - 1) Applicable monitoring or testing methods, cited in:
 - 10 CSR 10-6.030, “Sampling Methods for Air Pollution Sources”;
 - 10 CSR 10-6.040, “Reference Methods”;
 - 10 CSR 10-6.070, “New Source Performance Standards”;
 - 10 CSR 10-6.080, “Emission Standards for Hazardous Air Pollutants”; or
 - 2) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

V. General Permit Requirements

Permit Duration

10 CSR 10-6.065(6)(C)1.B.

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

General Record Keeping and Reporting Requirements

10 CSR 10-6.065(6)(C)1.C

- I) Record Keeping
 - A) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
 - B) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
- II) Reporting
 - A) The permittee shall submit a report of all required monitoring by:
 - 1) October 1st for monitoring which covers the January through June time period, and
 - 2) April 1st for monitoring which covers the July through December time period.
 - 3) Exception: Monitoring requirements which require reporting more frequently than semi annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
 - B) Each report must identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
 - C) All reports shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102.
 - D) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
 - 1) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7. of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if you wish to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and that you can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
 - 2) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
 - 3) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semiannual report shall be reported on the schedule specified in the permit.

- 4) These supplemental reports shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.
- E) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- F) The permittee may request confidential treatment of information submitted in any report of deviation.

Risk Management Plans Under Section 112(r)
10 CSR 10-6.065(6)(C)1.D.

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

- 1) June 21, 1999;
- 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
- 3) The date on which a regulated substance is first present above a threshold quantity in a process.

Severability Clause
10 CSR 10-6.065(6)(C)1.F.

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

General Requirements
10 CSR 10-6.065(6)1.G

- 1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and re-issuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, will not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

Incentive Programs Not Requiring Permit Revisions

10 CSR 10-6.065(6)(C)1.H.

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

Reasonably Anticipated Operating Scenarios

10 CSR 10-6.065(6)(C)1.I.

EU0150, the barge unloading hopper and conveyor, and EU0160, the materials handling building were permitted under Construction Permit No.1099-004 for barge unloading of lead concentrate. Construction Permit No. 092001-012 was issued for the same equipment to be used for the unloading of coke barges.

Emissions Trading

10 CSR 10-6.065(6)(C)1.J.

None.

Compliance Requirements

10 CSR 10-6.065(6)(C)3.

- I) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- II) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
 - A) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
 - B) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - C) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - D) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- III) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
 - A) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
 - B) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- IV) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, as well as the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and Part 64 exceedances

and excursions must be included in the compliance certifications. The compliance certification shall include the following:

- A) The identification of each term or condition of the permit that is the basis of the certification,
- B) The current compliance status, as shown by monitoring data and other information reasonably available to the installation,
- C) Whether compliance was continuous or intermittent,
- D) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period, and
- E) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

Permit Shield

10 CSR 10-6.065(6)(C)6.

- I) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
 - A) The applicable requirements are included and specifically identified in this permit; or
 - B) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
- II) Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
 - A) The provisions of section 303 of the Act or section 643.090, RSMo concerning emergency orders,
 - B) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
 - C) The applicable requirements of the acid rain program,
 - D) The administrator's authority to obtain information, or
 - E) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

Emergency Provisions

10 CSR 10-6.065(6)(C)7.

- I) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7., shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
 - A) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
 - B) That the installation was being operated properly,
 - C) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
 - D) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- II) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Operational Flexibility

10 CSR 10-6.065(6)(C)8.

An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program and the Administrator at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that established an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

- I) Section 502(b)(10) changes. Changes that, under section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), record keeping, reporting or compliance requirements of the permit.
 - A) Before making a change under this provision, The permittee shall provide advance written notice to the Air Pollution Control Program and to the Administrator, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and this agency shall place a copy with the permit in the public file. Written notice shall be provided to the administrator and this agency at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, The permittee shall provide notice to the administrator and the permitting authority as soon as possible after learning of the need to make the change.
 - B) The permit shield shall not apply to these changes.

Off-Permit Changes

10 CSR 10-6.065(6)(C)9.

- I) Except as noted below, The permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the application, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:
 - A) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; The permittee may not change a permitted installation without a permit revision, if this change is subject to any requirements under Title IV of the Act or is a Title I modification;
 - B) The permittee must provide written notice of the change to the permitting authority and to the administrator no later than the next annual emissions report. This notice shall not be required for changes that are insignificant activities under paragraph (6)(B)3. of this rule. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.
 - C) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
 - D) The permit shield shall not apply to these changes.

Responsible Official

10 CSR 10-6.020(2)(R)12.

The application utilized in the preparation of this permit was signed by Clifton Gray, General Manager. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreements to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

Reopening Permit For Cause

10 CSR 10-6.065(6)(E)6.

In accordance with 10 CSR 10-6.065(6)(E)6.A., this permit may be reopened with cause if:

- 1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
- 2) MDNR or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 3) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 4) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit; or
- 5) MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

Statement of Basis

10 CSR 10-6.065(6)(E)1.C.

This permit is accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

Attachment A-1

[illegible]

Attachment A-2

[illegible]

Attachment A-3

Section 2 Opacity Emissions Observations	
Company	Observer
Location	Observer Certification Date
Date	Emission Unit
Time	Control Device

Hour	Minute	Seconds				Steam Plume (check if applicable)		Comments
		0	15	30	45	Attached	Detached	
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							

SUMMARY OF AVERAGE OPACITY				
Seq Number	Time		Opacity	
	Start	End	Sum	Average

Readings ranged from _____ to _____ % opacity.

Was the emission unit in compliance at the time of evaluation?

Yes No Signature of Observer _____

Attachment B

Fugitive Emission Observations

[illegible]

Consent Judgement

Process Weight Limits

[illegible]

- Sinter plant production limited to 283,920 tons of finished sinter per each calendar quarter.
- Blast furnace production limited to 114,005 tons of lead contained in lead-bearing material charged per each calendar quarter.
- Refinery production limited to 80,808 tons of lead metal cast per each calendar quarter.

NOTE: See Permit Condition PW005. Production of finished lead shall be limited to 50,000 short tons per quarter.

Electrostatic Precipitator Data

Note: ESP must operate with a minimum of 3 fields on line
Normal Temperature Range is 400 °F to 600 °F

Normal Temperature Range is 400 °F to 600 °F

Acid Plant

[illegible]

Attachment F

Page 1

BAGHOUSE SOP PLAN

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BAGHOUSE SOP PLAN

(i) INTRODUCTION

This plan is submitted in accordance with the primary smelter MACT standard provisions, specifically 40 CFR 63.1547, which requires the preparation and use of a standard operating procedures manual for all baghouses used to control process, process fugitive, or fugitive dust emission sources.

The applicable processes, which are ventilated through this system, are as follows:

#3 BAGHOUSE: The baghouse system is a negative-pressure unit designed at 300,000 acfm with individual compartments each containing 384 bags. This baghouse ventilates the Sinter Plant including industrial hygiene ventilation points. The system is maintained by a 2-man crew with additional support from maintenance personnel and electricians when needed.

#5 BAGHOUSE: The baghouse system is a negative-pressure unit designed at 500,000 acfm with individual compartments each containing 384 bags. This baghouse ventilates the Blast Furnace and industrial hygiene ventilation points. The system is maintained by a 2-man crew with additional support from maintenance personnel and electricians when needed.

DROSS FURNACE BAGHOUSE #6: The baghouse system is a negative-pressure unit designed at 80,000 acfm with 208 bags. Present ventilation lines include the Dross Plant kettles and the area directly above the charging area. The system is maintained by a 2-man crew with additional support from maintenance personnel and electricians when needed.

COOLER BAGHOUSE: The baghouse system is a negative-pressure unit designed at 110,000 acfm with individual compartments each containing 972 bags. Ventilation lines feed the system which include the carrier cooler and other belt transfer points. The system is maintained by a 4-man crew with additional support from maintenance personnel and electricians when needed.

CRUSHER BAGHOUSE: The baghouse system is a negative-pressure unit designed at 30,000 acfm with 660 bags. Ventilation trunk lines feed the system which includes the Sinter Plant crushing circuit and industrial hygiene ventilation points. The system is maintained by a 4-man crew with additional support from maintenance personnel and electricians when needed.

MIXING DRUM BAGHOUSE: The baghouse system is a negative-pressure unit designed at 20,000 acfm with 196 bags. The ventilation lines system includes the Sinter Plant Mixing Drum and industrial hygiene ventilation points. The system is maintained by a 2-man crew with additional support from maintenance personnel and electricians when needed.

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BAGHOUSE SOP PLAN

CAGE PAKTOR BAGHOUSE (South End Baghouse): The baghouse system is a negative-pressure unit designed at 32,000 acfm with 364 bags. Ventilation trunk lines feed the system which include the Sinter Plant belt transfer points. The system is maintained by a 4-man crew with additional support from maintenance personnel and electricians when needed.

76" ROLLS BAGHOUSE: The baghouse system is a negative-pressure unit designed at 15,000 acfm with 320 bags. Ventilation trunk lines feed the system which include the Sinter Plant 76" smooth rolls crusher and the remaining processes including industrial hygiene ventilation points. The system is maintained by a 4-man crew with additional support from maintenance personnel and electricians when needed.

CV-22 BAGHOUSE: The baghouse system is a negative-pressure unit designed at 3,140 acfm with 64 bags. Ventilation trunk lines feed the system, which include the Sinter Plant CV-22 transfer point and the remaining processes including industrial hygiene ventilation points. The system is maintained by a 2-man crew with additional support from maintenance personnel and electricians when needed.

BIN VENT #1 BAGHOUSE: The baghouse system is a negative-pressure unit designed at 2,000 acfm with 64 bags. Two major ventilation trunk lines feed the system, which include the #10 bin and transfer point to CV-21. The system is maintained by a 2-man crew with additional support from maintenance personnel and electricians when needed.

STRIP MILL BAGHOUSE: The baghouse system is a negative-pressure unit designed at 5,000 acfm with 216 bags. Ventilation trunk lines feed the system, which include the Strip Mill north end including industrial hygiene ventilation points. The system is maintained by a 2-man crew with additional support from maintenance personnel and electricians when needed.

SILVER DROSS REFINING BAGHOUSE: The baghouse system is a negative-pressure unit designed at 2,000 acfm with 36 bags. Ventilation trunk lines feed the system, which include the refining kettles including industrial hygiene ventilation points. The system is maintained by a baghouse crew with additional support from maintenance personnel and electricians when needed.

REFINERY BUILDING BAGHOUSE #9: The baghouse system is a negative-pressure unit designed at 250,000 acfm. Ventilation trunk lines feed the system, which include the roof of the refinery. The system is maintained by a baghouse crew with additional support from maintenance personnel and electricians when needed.

Attachment F

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BAGHOUSE SOP PLAN

BLAST FURNACE & DROSS PLANT BUILDING VENTILATION BAGHOUSE #7: The baghouse system is a negative-pressure unit designed at 300,000 acfm. Three major ventilation trunk lines feed the system, which include the Dross Plant, Blast Furnace and the remaining processes including industrial hygiene ventilation points. The system is maintained by a baghouse crew with additional support from maintenance personnel and electricians when needed.

REFINERY KETTLE & CV10 VENT BAGHOUSE #8: The baghouse system is a negative-pressure unit designed at 80,000 acfm. Two major ventilation trunk lines feed the system, which include the Refinery kettles and the CV-10 area and the remaining processes including industrial hygiene ventilation points. The system is maintained by a baghouse crew with additional support from maintenance personnel and electricians when needed.

BARGE UNLOADING HOPPER BAGHOUSE: The baghouse system is a negative-pressure unit with a design rate of 7,200 acfm. The baghouse ventilates the loading of the receiving hopper from the excavator bucket. The system is maintained by a baghouse crew with additional support from maintenance personnel and electricians when needed.

BARGE UNLOADING TRANSFER TO TRUCK BAGHOUSE: The baghouse system is a negative-pressure unit with a design rate of 4,800 acfm. The baghouse ventilates the conveyor belt discharge into the receiving truck. The system is maintained by a baghouse crew with additional support from maintenance personnel and electricians when needed.

II. INSPECTION/MAINTENANCE PROCEDURES

Shakers are checked from the outside, primarily inspecting to insure that they are operating properly. Primary areas inspected include bolts, bearings, couplings, and u-belts. Specific provisions for maintenance and inspection under 40 CFR 63.1547(c) include:

- 1) Daily monitoring of pressure drop across each baghouse cell.
- 2) Minimum weekly confirmation that dust is being removed from cell hoppers.
- 3) Daily check of compressed air supply for pulse jet baghouses.
- 4) Daily checks of bag cleaning mechanisms are conducted to ensure all bearings, couplings, and bolts are in proper working order on the shaker system. Baghouse pressure drop and bag cleaning system air pressures are monitored daily to ensure all diaphragms, solenoids, air lines and compressors are in working order on the pulse air baghouses.

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BAGHOUSE SOP PLAN

- 5) Minimum monthly check of bag cleaning mechanisms for proper functioning.
- 6) Minimum quarterly, conduct visual inspection of shaker-type bags for kinked (kneaded or bent) or laying on their sides.
- 7) Minimum quarterly inspection of the physical integrity of the baghouse through visual inspection of the baghouse interior for air leaks.
- 8) Minimum quarterly inspections of fans for wear, material build-up, and corrosion through visual inspection, vibration detectors, or equivalent method.
- 9) Continuous operation of a bag leak detection system.

Records of inspections conducted will be kept for a period of 5 years.

III. BAG LEAK DETECTION SYSTEM

Baghouses are equipped with a (Tribo flow) bag leak detection system on the outlet sides of the units. Baghouse #3, #5, and the cooler baghouse are equipped with two probes each to cover the proper area due to ductwork size on #5 baghouse and dual ducts on #3 and the cooler baghouse. Specifications and requirements under 40 CFR 63.1547(e) include:

- 1) Bag Leak detection system with a manufacturers certified detectable range capable of 10mg/M^3 (0.0044 grains per acfm) or less. The Triboguard III Bag Leak detection system being used has been manufacturer independently tested down to 0.005 mg/M^3 .
- 2) System provides output of relative particulate matter and outputs are continuously recorded.
- 3) The system is equipped with an alarm system such that upon an alarm, at a continuously manned security desk, the appropriate personnel can be immediately contacted.
- 4) Bag leak detection systems that work based on the triboelectric effect shall be installed, calibrated, and maintained in a manner consistent with the guidance provided in the U.S. Environmental Protection Agency guidance document "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015).
- 5) Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and the alarm delay time.

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BAGHOUSE SOP PLAN

- 6) Following initial adjustment, the owner or operator shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the approved SOP. In the event that a sensitivity must be made, the adjustment will not be increased more than 100% or decreased more than 50% over a 365 day period and only performed after the baghouse has been thoroughly checked and found to be in good operating condition prior to adjustments. If an adjustment is required in a greater range than the 100% increase or decreased more than 50% as noted above, a responsible official must certify the adjustment.
- 7) The bag leak detectors are located down-stream of the baghouse and upstream of any wet acid gas scrubber.

IV. CORRECTIVE ACTION PROCEDURES

Any alarms initiated from the bag leak detection system, will be responded to in accordance with section 63.1547, including but not limited to those actions outlined in 63.1547(f)(1) through (6). Once a problem has been corrected, the compartment of concern will be returned back to service. Upon receiving an alarm, an appropriate person will be contacted and information as to which baghouse has the alarm will be relayed to them. The indicated baghouse receiving the alarm will then receive a visible check of the corresponding stack and/or outlet trail(s). If no indications of an actual baghouse problem are found, the Tribo electric probe will then be checked and cleaned of debris and/or moisture to assure that the corresponding alarm is valid. If at any time during The alarm investigation a problem is identified, actions will be taken to minimize emissions, which may include but are not limited to, the following.

- 1) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.
- 2) Sealing off defective bags or filter media.
- 3) Replacing defective bags or filter media, or otherwise repairing the control device.
- 4) Sealing off a defective baghouse compartment.
- 5) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.
- 6) Shutting down the process producing the particulate emissions.

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BAGHOUSE SOP PLAN

Attachment i. CONFINED SPACE ENTRY PERMIT

DEPARTMENT: _____ DATE: _____ TIME _____

CONFINED SPACE IDENTIFICATION: _____

DESCRIPTION OF WORK OR JOBS TO BE PERFORMED:

(Use reverse side if needed)

LIST EMPLOYEES and/or CONTRACTORS ENTERING CONFINED SPACE:

(Use reverse side if needed)

(CHECK IF COMPLETED)

_____ CONFINED SPACE SAFETY DATA SHEET REVIEWED
_____ PRE-ENTRY TESTING COMPLETE
_____ EQUIPMENT ISOLATION REQUIREMENTS MET
_____ PURGING & VENTILATION REQUIREMENTS MET
_____ PHYSICAL HAZARDS PROTECTION REQUIREMENTS MET
_____ STAND-BY PERSONAL ASSIGNED
_____ EMERGENCY RESCUE EQUIPMENT CHECKED & AVAILABLE
_____ OTHER PRECAUTIONS BEING TAKEN: _____

GROUP LEADER OR PERSON RESPONSIBLE FOR WORKERS ENTERING CONFINED SPACE:

Attachment F

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BAGHOUSE SOP PLAN

Attachment ii.

CONFINED SPACE

NON-PERMIT REQUIRED FORM

DEPARTMENT: _____ DATE: _____ TIME _____

NON-PERMIT REQUIRED AREA IDENTIFICATION: _____

DESCRIPTION OF WORK OR JOBS TO BE PERFORMED:

(Use reverse side if needed)

LIST EMPLOYEES and/or CONTRACTORS ENTERING NON-PERMIT REQUIRED AREA:

(Use reverse side if needed)

_____ CONTINUED TESTING REQUIRED

GROUP LEADER OR PERSON RESPONSIBLE FOR WORKERS ENTERING NON-PERMIT
REQUIRED AREA

Attachment F

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BAGHOUSE SOP PLAN

Attachment iii #3 and #5 Baghouse Inspection Sheet

							R	O	W		N	U	M	B	E	R							
			1	2	3	4	5	6	7	8			9	10	11	12	13	14	15	16			
		24	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	24		
		23	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	23		
		22	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	22		
		21	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	21		
		20	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	20		
		19	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	19		
	B	18	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	18	B	
	A	17	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	17	A	
C	G	16	O	O	O	O	O	O	O	O		C	O	O	O	O	O	O	O	O	16	G	C
A		15	O	O	O	O	O	O	O	O		A	O	O	O	O	O	O	O	O	15		A
T	N	14	O	O	O	O	O	O	O	O		T	O	O	O	O	O	O	O	O	14	N	T
W	U	13	O	O	O	O	O	O	O	O		W	O	O	O	O	O	O	O	O	13	U	W
A	M	12	O	O	O	O	O	O	O	O		A	O	O	O	O	O	O	O	O	12	M	A
L	B	11	O	O	O	O	O	O	O	O		L	O	O	O	O	O	O	O	O	11	B	L
K	E	10	O	O	O	O	O	O	O	O		K	O	O	O	O	O	O	O	O	10	E	K
	R	9	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	9	R	
		8	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	8		
		7	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	7		
		6	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	6		
		5	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	5		
		4	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	4		
		3	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	3		
		2	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	2		
		1	O	O	O	O	O	O	O	O			O	O	O	O	O	O	O	O	1		
			1	2	3	4	5	6	7	8			9	10	11	12	13	14	15	16			
								R	O	W		N	U	M	B	E	R						
									S	H	A	K	E	R	S								
							A	C	C	E	S	S		D	O	O	R						

BAGHOUSE # _____

Scraped Hopper _____
Hammered Cell Plate Floor _____

COMPARTMENT NUMBER _____

BURN HOLES _____
RETENTIONED BAGS _____

FALLEN BAGS _____
VERTICAL TEARS _____
INSPECTED BY _____
INSPECTION DATE _____

VACUUMED CELL _____
NEW TAIL HANGER BRACKETS _____

LEGEND

H = HOLE IN BAG
S = LEAK SEALED
R = BAG REPLACED
T = BAG TIED OFF
F = FALLEN BAG REHUNG
C = HOLE IN STRUCTURE

No. of bags replaced _____
No. of bags patched _____
No. of bags sealed _____

Attachment F

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BAGHOUSE SOP PLAN

Attachment iv. Generic Baghouse Inspection Sheet

Baghouse # _____ DATE _____

Cell # _____ INSPECTED BY _____

BAG CONDITION GOOD FAIR FAILING

CELL FLOOR CONDITION CLEAN OK NEEDS VACUUMED

BAG TENSION _____

SHAKER PIN GREASE FITTINGS _____

SHAKER PINS AND BUSHINGS _____

SHAKER DRIVE BELTS _____

SHAKER TUBE CONDITION _____

SHAKER TUBE ANTI FALL CHAINS _____

SHAKER TUBE V BLOCKS _____

SHAKER TUBE KNIVES _____

OUTLET DAMPERS _____

INLET DAMPERS _____

REVERSE AIR DAMPERS _____

HOPPER SCREW AND BEARINGS _____

ROTARY VALVE _____

HOPPER DRIVE CHAINS _____

CELL DOOR GASKETS _____

CELL WALLS _____

Attachment F

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Attachment v. DROSS FURNACE BAGHOUSE INSPECTION SHEET

DOE RUN AMEREX BAGHOUSE

Week Beginning Date: ____ / ____ / ____

HOPPER LEVEL

	Transfer Conveyors	Lubrication	Augers	% Build-up in Hoppers	Hopper Condition	% Full Disposal Cont.	Inspected By
M							
T							
W							
T							
F							

Comments: _____

TUBESHEET LEVEL

	Inlet/ Outlet Dampers	Pulse Valves & Lines		DP Across Bags Compartment #						Photohelic		Trial Damper Setting	Inspected By
		Header Press	OK/Alert	1	2	3	4	5	Door Seals	High	Low		
M													
T													
W													
T													
F													

Comments: _____

OUTSIDE

	Stack	Compressor Drain H ₂ O	Fan Condition Vibration	Dryer	Dew Point Setting	Control Board	Inspected By
M							
T							
W							
T							
F							

Comments: _____

Work Orders Issued: _____

LEGEND: X = Alert √ = OK & Condition Acceptable

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Attachment vi.

Date: _____

Operator: _____

Laborers: _____

Do a Visual Inspection of the Baghouse

OK

B.O.

Motor/Fan Area:

Shaker Mtr/Arms:

Duct Work (mark comments)

Check Bags

Damaged: _____

Out of Holes:

Down: _____

Grease Shaker Fittings
(minimum monthly, check
previous paperwork)

Yes

No

Condition of Cell Plate

Clean

Dirty

If dirty, remove appropriate bags and clean cell plate to the hopper

Empty hopper into barrels. Number of fume barrels filled _____

(Full fume barrels must be sealed and reported to Supervision and/or Service Dept.)

Person notified _____

Comments: _____

```

00000000000000000000000000
00000000000000000000000000
00000000000000000000000000
00000000000000000000000000
00000000000000000000000000
00000000000000000000000000

```

N 

*Mark position of bags
listed on worksheet*

Copy (fax) to D. Henke
Copy for file

Door

[illegible]

BAGHOUSE SOP PLAN

#5 BAGHOUSE WORK SHEET

[illegible]

Attachment F

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BAGHOUSE SOP PLAN

Attachment viii. BLAST FURNACE #5 BAGHOUSE DAILY CHECKLIST I

Date: _____

Inlet Temperature: _____

No. of Cells In-Line: _____

Main Trail Draft: _____

Baghouse D.P.: _____

Opacity: _____

DP Reading: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____

10. _____ 11. _____ 12. _____ 13. _____ 14. _____ 15. _____ 16. _____ 17. _____

No. 1 Fan Amps: _____ No. 2 Fan Amps: _____

Check peep holes for emissions: ☐ O.K. ☐ Alert

Hoppers: _____

Shakers: _____

Augers: _____

Inlet/Outlet damper seal check: ☐ O.K. ☐ Alert

Lubrication Alert List: _____

Fans: _____

Comments:

Technician Name: _____

Attachment F

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BAGHOUSE SOP PLAN

Attachment ix. BLAST FURNACE #5 BAGHOUSE DAILY CHECKLIST II

Date: _____

Inlet Temperature: _____

Main Trail Draft: _____

No. of Cells In-Line: _____

Tribo Guard: _____

Baghouse D.P.: _____

Opacity: _____

DP Reading: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____

10. _____ 11. _____ 12. _____ 13. _____ 14. _____ 15. _____ 16. _____ 17. _____

No. 1 Fan Amps: _____ No. 2 Fan Amps: _____

Check peep holes for emissions: ☐ O.K. ☐ Alert Cell floor Level _____ Shaker Level _____

Hoppers: _____

Shakers: _____

Augers: _____

Reverse Air / Inlet/Outlet damper seal check: ☐ O.K. ☐ Alert

Lubrication Alert List: _____

Fans: _____ Oil Level _____ Water Level _____

Comments:

Technician Name: _____

Attachment F

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BAGHOUSE SOP PLAN

Attachment x. SINTERING PLANT #3 BAGHOUSE DAILY CHECKLIST

Date: _____

No. of Cells In-Line: _____

Baghouse D.P.: _____

Opacity: _____

DP Reading: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____

10. _____ 11. _____ 12. _____

Check peep holes for emissions: ☐ O.K. ☐ Alert Cell floor Level _____ Shaker Level _____

Hoppers: _____

Shakers: _____

Augers: _____

Inlet/Outlet damper seal check: ☐ O.K. ☐ Alert

Lubrication Alert List: _____

Fans: _____

Comments: _____

Technician Name: _____

Attachment F

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BAGHOUSE SOP PLAN

Attachment xi. #3 BAGHOUSE FAN INSPECTION SHEET

Date: __/__/__

No. 6 Fan Temperature West Bearing _____	No. 7 Fan Temperature West Bearing _____
No. 6 Fan Vibration _____	No. 7 Fan Vibration _____
No. 6 Fan Temperature East Bearing _____	No. 7 Fan Temperature East Bearing _____
No. 6 Fan Vibration _____	No. 7 Fan Vibration _____
No. 6 Fan Amps _____ Sinter Draft _____ Tribo Guard _____	No. 7 Fan Amps _____ Differential Pressure _____ Inlet Temperature _____

Attachment F

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BAGHOUSE SOP PLAN

Attachment xii. GENERIC BAGHOUSE WORK SHEET

DATE: _____ OPERATOR: _____

CONTROL PANEL: # of CELLS IN LINE _____ DIFF PRESSURE _____

INLET DRAFT _____

OPACITY _____

TRANSFER AND GATHERING CONVEYORS _____

ROTARY VALVES: CHECK IN MANUAL POSITION, 2 HOPPERS AT A TIME TO VERIFY THAT THE SHAFT IS TURNING. MAKE CHECKS AS QUICKLY AS POSSIBLE, SO AS NOT TO OVERLOAD THE CONVEYOR SYSTEM.

NOTE: IF HOPPER SCREW CHAIN IS TURNING AND ROTARY VALVE SHAFT IS NOT, TAKE CELL OUT OF SERVICE UNTIL THE SHEAR PIN CAN BE REPLACED.

ROTARY VALVE DRIVE CHAINS _____

HOPPER SCREWS: CHECK ALL CHAINS AND SPROCKETS _____

HOPPER SCREW DISCONNECTS IN ON POSITION _____

INLET DAMPER POSITION _____

PEEPHOLES _____

SHAKERS: BELTS AND ARMS _____

SHAKER BEARINGS AND PINS _____

SHAKER DISCONNECTS IN ON POSITION _____

NOTE: A CELL WITH SHAKER BELTS OFF OR BROKEN PARTS SHOULD BE TAKEN OUT OF LINE UNTIL REPAIRED.

OUTLET DAMPERS _____

Attachment F

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BAGHOUSE SOP PLAN

Attachment xiii. GENERIC PULSE BAGHOUSE DAILY/WEEKLY ITEMS MONITORING CHECKLIST

Year & Month _____

Baghouse Number/Name: _____

Day	Time	Fan Amps	Damper (% Open)	Baghouse Pressure		Pulse Air Pressure	Weekly Confirmation of Dust Removal	Comments/ Corrective Actions Findings, Tribo system items, etc.
				Before cleaning	after cleaning			
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

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BAGHOUSE SOP PLAN

Attachment xiv. GENERIC PULSE BAGHOUSE MONTHLY/ QUARTERLY WORK SHEET

Year & Quarter: _____

Baghouse Number/Name: _____

Month	Monthly Cell Plate Floor Pressure Readings								Monthly Bag Cleaning Mechanisms Air Lines, Diaphragms, Solenoids
	1	2	3	4	5	6	7	8	

Additional Service Notes: _____

Month	Door Seals	Inlet Dampers Arms & Pins	Outlet Dampers Arms & Keyways	Hopper Screws & Chain Drives	Tribo. Probe(s) Cleaned

Additional Service Notes: _____

QTR 1 QTR 2 QTR 3 QTR 4
QUARTERLY INSPECTION ITEMS: CIRCLE ONE: Jan, Feb, Mar Apr, May, Jun July, Aug, Sept Oct, Nov, Dec

Internal check for kinked, twisted, dropped, or other bag problems:

Internal Baghouse physical integrity check of walls, hoppers, cages, & cell plate floors:

Baghouse Fan Inspected for build-up, wear, vibration, cooling fin debris, corrosion, etc.:

Attachment F

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BAGHOUSE SOP PLAN

Attachment xv. Normal Baghouse Differential Pressure Operating Ranges

#3 baghouse	5' – 10"
#5 baghouse	4" – 14"
#6 baghouse	3" – 10"
#7 baghouse	4" – 14"
#8 baghouse	4" – 10"
#9 baghouse	4" – 14"
Sinter plant south end (a/k/a Cage Packtor) baghouse	4" – 10"
Sinter plant CV – 22/76 Smooth Rolls baghouse	3" – 10"
Sinter plant # 10 Bin Vent baghouse	3" – 6"
Sinter plant Crusher baghouse	4" – 10"
Sinter plant Cooler baghouse	3" – 10"
Sinter plant Mixing Drum baghouse	3" – 10"
Strip Mill baghouse	3" – 10"
Silver refining baghouse	4" – 14"
Barge unloading hopper baghouse	3" – 14"
Barge unloading transfer to truck baghouse	3" – 14"

Baghouse Pressure Drop Readings

[illegible]

Attachment H

Monthly Lead Emission Tracking
Permit Condition (EU0150 and EU0160)-002

This sheet covers the period from _____ to _____ (Month, Day, Year)

Date Month Year	Monthly Lead Bearing Materials Unloaded (Tons)	Controlled Lead Emission Factor (lbs/ton)	Monthly Lead Emissions (Tons)	12 Months Rolling Total (Tons)	Date Month Year	Monthly Lead Bearing Materials Unloaded (Tons)	Controlled Lead Emission Factor (lbs/ton)	Monthly Lead Emissions (Tons)	12 Months Rolling Total (Tons)
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
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		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		
		0.00137					0.00137		

The monthly lead emission (Tons) is calculated by multiplying the monthly lead concentrate unloaded (Tons) from the permit condition equipment by the controlled lead emission factor (lbs/ton) and dividing by 2000.

Sum of Lead in 12-Consecutive Months Rolling Total of 0.60 tons or less indicates compliance.

Attachment I

Alternate Operating Scenario Log

[illegible]

Attachment J

Page 1

WORK PRACTICE MANUAL

Table of Contents

Area No.	Area	Page No.
---	Purpose, Use and Change	1
150	Sinter Plant	2
155	Blast Furnace	3
156	Strip Mill	4
156	Refinery	5
162	Baghouse	6
166	Yard	7
---	Construction Guidelines	8
---	Record Keeping – General	9
---	Suspension of Work Practices – Demo	10
---	Ventilation Survey	11
---	Appendices	(ii)

Attachment J

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WORK PRACTICE MANUAL

APPENDICES

Appendix	Location/Usage	Page No.
A	Sinter Hood – Decision Tree	A-1
B	Sinter Plant – Waste gas inlet Temperature to # 3 Baghouse	B-1
C	Blast Furnace/# 5 Baghouse – Waste gas Inlet Temperature to # 5 Baghouse	C-1
	Dumping to Trestle Bins – Decision Tree Use	C-2
D	Ventilation Systems:	
	Smooth Rolls Baghouse	D-1
	CV-10 Grizzly	D-2
	CV-10 and CV-11 Vent	D-3
	CV-13 and CV-14 Vent	D-4
	Scale Belt Vent	D-5
	Crow's Nest Ventilation	D-6
	"D" Kettle Fluxing Vent	D-7
	Blast Furnace Front End Vent	D-8
E	Plant Layout with Water/Sweeper Truck Routes (Routes not included in WPM)	
F	Plant Fence Line (Fence line not included in WPM)	
G	Building Enclosure Inspection	

Attachment J

Page 3

WORK PRACTICE MANUAL

PURPOSE, USE and CHANGE

1. This manual is written to comply with the Missouri Air Conservation Rule 10 CSR 10-6.120 that states at (3)(A):

The owner or operator shall prepare, submit for approval, and then implement a process and area-specific work practice manual that will apply to locations of fugitive lead emissions at the installation;

2. and at (3)(B)2.:

The manual shall be the method of determining compliance with the provisions of this subsection. Failure to adhere to the work practices in the manual shall be a violation of this rule.

ACTION TO PREVENT EXCESS PROCESS EMISSIONS

3. Utilizing Emissions Predictor Profile Operating Procedures (OP) and Decision Trees (DT)

A	Sinter Hood – Decision Tree	A-1
B	Sinter Plant – Waste gas Inlet Temperature to # 3 Baghouse	B-1
C	Blast Furnace/# 5 Baghouse – Waste Gas Inlet Temperature to # 5 Baghouse	C-1
	Dumping to Trestle Bins – Decision Tree Use	C-2

Definitions:

Accumulated materials: lead bearing particulate that has the potential to become easily re-entrained.

Hose down: to wet or reduce accumulated materials.

Wetting: sufficient water to be used to insure no visible emission immediately following hose down.

Attachment J

Page 4

WORK PRACTICE MANUAL

150 Sinter Plant WPM and SOP

1. A simplified crushing circuit will be installed in 1991 in the sinter plant, resulting in a reduction in the number of physical pieces of equipment, reduced number of transfer points and improving ventilation through more efficient baghouses versus the previous wet scrubbers.

The new sinter plant crushing circuit will be ventilated by the new sinter plant baghouse.

2.a. The following areas will be hosed down on a per shift basis to wet or reduce accumulated material.

Location	Elevation, ft. (*)
-- sinter machine	55
-- claw breaker floor	40
-- CV-40 floor area	40
-- live roll floor area	19
-- bottom floor of sinter plant	0

b. The following areas are scheduled for hose down on a per day basis to wet or reduce accumulated material:

-- wind box floor area	45
-- crusher baghouse floor	40

(*) In a. and b. elevations are relative to the bottom floor elevation of 0 feet.

3. Hose down will only be performed when weather conditions permit so as not to create slipping hazards due to ice formation or glazing of surfaces. These conditions can exist when the temperature is less than 35 °F or whenever the application of water results in the formation of ice, which could result in injury to personnel.

4. Keeping building doors closed during operations – Personnel doors and equipment doors will be installed to allow various pieces of equipment, repair parts and personnel access to the sinter plant building. Maintenance of doors and siding – During normal operating conditions all doors will be kept closed and siding/doors will be inspected regularly and repaired promptly. The area's employees will inspect the condition of the siding/doors once per quarter. If holes or openings are found in the doors/siding, repairs will be initiated as soon as possible. The area supervisor will keep records of quarterly inspections using a form found in appendix G.

During periods of heat alerts, it may be necessary to open these doors to prevent heat stress or exhaustion of those employees working inside. A record will be kept of those events.

5. By November 4, 2001, The Doe Run Company will conduct building inflow testing to verify inflow. Agency personnel will be notified a minimum of 30 days in advance of the testing so as to observe the testing should they so desire. Simultaneously with the inflow measurements, fan amperages will be determined as well.

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WORK PRACTICE MANUAL

152 Blast Furnace WPM and SOP

1.
 - a. The blast furnace feed floor operator will hose down feed floor areas north and south of the charging slots on a per shift basis to wet or reduce accumulated material.
 - b. The floor area in front of the blasting furnaces (blast furnace crane bay) is to be hosed down on a daily basis to wet or reduce accumulated material.
 - c. The area underneath the CV-13 conveyor will be hosed down on a weekly basis to wet or reduce accumulated materials.
2. Hose down will only be performed when weather conditions permit so as not to create slipping hazards due to ice formation or glazing of surfaces. These conditions can exist when the temperature is less than 35 °F or whenever the application of water results in the formation of ice, which could result in injury to personnel.
3. At least 3 pots will be used in lead pot rotation during normal furnace operations.
4. Record keeping for the blast furnace shall include:
 - a. for hosedown of area underneath CV-13 belt, the date, the shift work performed on (e.g. day, evening, night) and foreman supervising the shift (e.g. John Smith)
5. Keeping building doors closed during operations – Personnel doors and equipment doors will be installed to allow various pieces of equipment, repair parts and personnel access to the Blast Furnace and Dross Plant buildings. Maintenance of doors and siding – During normal operating conditions all doors will be kept closed and siding/doors will be inspected regularly and repaired promptly. The area's employees will inspect the condition of the siding/doors once per quarter. If holes or openings are found in the doors/siding, repairs will be initiated as soon as possible. The area supervisor will keep records of quarterly inspections using a form found in appendix G.

During periods of heat alerts, it may be necessary to open these doors to prevent heat stress or exhaustion of those employees working inside. A record will be kept of those events.
6. By January 31, 2003, The Doe Run Company will conduct building inflow testing to verify inflow into the Blast Furnace and Dross Plant buildings. Agency personnel will be notified a minimum of 30 days in advance of the testing so as to observe the testing should they so desire. Simultaneously with the inflow measurements, fan amperages will be determined as well.

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WORK PRACTICE MANUAL

155 Strip Mill WPM and SOP

1. Strip mill floor will be vacuumed at least once a week to reduce accumulated material.
2. Record keeping for the strip mill shall include:
 - a. for vacuuming of the strip mill floor area, the date, the shift work performed on (e.g. day, evening, night) and foreman supervising the shift (e.g. John Smith)

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WORK PRACTICE MANUAL

156 Refinery WPM and SOP

1. Refinery dock floor will be vacuumed at least once a month to reduce accumulated materials.
2. Refinery department will hose down the kettle floor at least once a week to wet or reduce accumulated materials.
3. Hose down will only be performed when weather conditions permit so as not to create slipping hazards due to ice formation or glazing of surfaces. These conditions can exist when the temperature is less than 35 °F or whenever the application of water results in the formation of ice, which could result in injury to personnel.
4. Record keeping for the Refinery shall include:
 - a. for hose down of kettle floor area, the date, the shift work performed on (e.g. day, evening, night) and foreman supervising the shift (e.g. John Smith).
 - b. for vacuuming of the refinery lead dock area, the date, the shift work performed on (e.g. day, evening, night) and foreman supervising the shift (e.g. John Smith).
5. Keeping building doors closed during operations – Personnel doors and equipment doors will be installed to allow various pieces of equipment, repair parts and personnel access to the Refinery building. Maintenance of doors and siding – During normal operating conditions all doors will be kept closed and siding/doors will be inspected regularly and repaired promptly. The area's employees will inspect the condition of the siding/doors once per quarter. If holes or openings are found in the doors/siding, repairs will be initiated as soon as possible. The area supervisor will keep records of quarterly inspections using a form found in appendix G.

During periods of heat alerts, it may be necessary to open these doors to prevent heat stress or exhaustion of those employees working inside. A record will be kept of those events.
6. By January 31, 2002, The Doe Run Company will conduct building inflow testing to verify inflow. Agency personnel will be notified a minimum of 30 days in advance of the testing so as to observe the testing should they so desire. Simultaneously with the inflow measurements, fan amperages will be determined as well.

Attachment J

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WORK PRACTICE MANUAL

162 Baghouse

1. The # 3 and # 5 baghouse will use the Redler conveyor to move captured dust back to the sinter plant for recycle.
2. The ground floor in the # 3 and # 5 baghouse will be hosed down on a per shift basis to wet or reduce accumulated material.
3. Hose down will only be performed when weather conditions permit so as not to create slipping hazards due to ice formation or glazing of surfaces. These conditions can exist when the temperature is less than 35 °F or whenever the application of water results in the formation of ice, which could result in injury to personnel.

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WORK PRACTICE MANUAL

166 Yard WPM and SOP

1. Water truck, hose washing and/or dry sweeper truck will wet and sweep those areas of plant that are accessible by the equipment on a daily basis (Monday through Friday schedule). See appendix E, plant layout with water/sweeper truck routes.
 2. Yard/transportation department is responsible for hosing down the area between the blast furnace blower room and the trestle on a weekly basis.
 3. Transportation will wet finished sinter cars with a fire hose prior to unloading sinter to stock.
 4. Truck watering and hose down of plant areas may be suspended during any period when the temperature is less than 35 °F, or whenever the application of water results in the formation of ice, which could result in injury to personnel.
 5. Record keeping for the yard shall include:
 - a. for wash down of the area between the blast furnace blower room and the trestle, the date, the shift work performed on (e.g. day, evening, night) and foreman supervising the shift (e.g. John Smith).
 6. Chemically stabilize concentrate storage piles once every 6 months between applications (e.g., once during the periods July-Dec and Jan-June). Complete first stabilization by 12/31/93.
- (WPM Nos. 7. and 8. are smelter option item Nos. 5. and 6. from the Consent Order in the 1993 Lead SIP Revision for Herculanum. Should Doe Run opt for “paving” in one or both item Nos. 5. and 6. from the consent order, then WPM item Nos. 7. and 8. would not require chemical stabilization and the new paved areas would be included in WPM 1. above, for the work practice of watering and sweeping.)
7. Chemically stabilize the unpaved portion of road from Station Street to the existing paving east. Unpaved portion of road is located just north of Strip Mill Building.

Doe Run has paved this area under item 7 and chemical stabilization is no longer required.

8. Chemically stabilize the river yard access road at a minimum of once every six (6) months between applications (e.g., once during the periods July-Dec and Jan-June).
9. Temporary sources of dust on paved surfaces outside the plant due to spillage of materials will be addressed so as to limit the re-entrainment of those materials. Clean up to consist of those materials being loaded into transfer vehicles by either hand shoveling or should the need arise mechanized equipment. Final clean up will incorporate the use of floor sweep compound which should adhere to the smaller particles, making them easier to remove.
10. Concentrate shall be unloaded at the railcar unloader between the hours of 6 AM and 6 PM. Fume shall be unloaded between the hours of 2 PM and 4 PM.

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WORK PRACTICE MANUAL

CONSTRUCTION GUIDELINES

For Capital Construction Projects

1. Prevention of fugitive dust shall be a consideration in the planning of construction projects.
2. Where feasible old building components will be cleaned by either vacuum or water hose prior to removal. Additional power washing may be performed, once the component has been removed to an area where electric shock or shorting of existing equipment can be avoided.
3. Where feasible both the in house water truck and sweeper truck shall be used during construction projects to address dirt stirred up by trucks.
4. Water hoses/water sprays shall be used to address potential dust emissions during excavation should the specific conditions warrant their use.
5. Excavation materials shall be managed to minimize dust blowing (for example, wetting with water hoses, surface treatment with dust binder, establishment of vegetation, trapping).

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WORK PRACTICE MANUAL

RECORD KEEPING - GENERAL

1. Records will be maintained of regularly scheduled quarterly inspections made by the environmental department of fugitive emissions control equipment such as hoods, air ducts and exhaust fans. See Appendix D for diagrams.
2. For records during periods of suspension of any work practices entry will be made in the weekly/monthly record after the date “Weather suspension”, “Equipment repair/maint”, “Operations suspension”, etc..
3. Records will be maintained of monthly audits conducted by the environmental department with those departments who conduct work practice controls contained in this manual on a daily or more frequent basis. The purpose of the audit is to certify that the requirements of the WPM are being followed.

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WORK PRACTICE MANUAL

SUSPENSION OF WORK PRACTICES

(b) Adverse Weather

The work practices that use the application of water as described herein may be suspended whenever the application of water results in the formation of ice, which could result in injury to plant personnel.

The work practices that refer to closure of doors may be suspended based on heat alerts as issued for the St. Louis area by the National Weather Service.

B. Equipment Maintenance and Repair

Sweeping and application of water may also be suspended during those periods necessary to perform maintenance and repairs of equipment essential to the respective activity. Any maintenance and repair work shall be completed as soon as possible, and upon completion, the respective activity shall be immediately resumed in accordance with the stated practice.

C. Suspension of Production Operations

In the event that department production operations are suspended and shutdown; sweeping and watering applications in the department may be suspended for the duration of such period until normal operations are resumed.

Attachment J

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WORK PRACTICE MANUAL

VENTILATION SURVEY

- A. The plant ventilation systems list in the appendices will be given a volume survey each calendar quarter.
- B. Volumes recorded will be compared with previous quarters to determine need for attention.
- C. Ventilation Systems:

	Name/Location	Approx. rate, acfm
1.	New smooth rolls baghouse	11,000
2.	CV-10 Grizzly	9,000
3.	CV-10/CV-11/CV-12 vent	8,000
4.	CV-13 and CV-14 vent	6,000
5.	Scale belt vent	11,000
6.	Crow's nest vent	14,000
7.	"D" kettle fluxing vent	12,000
8.	Blast furnace front end vent	25,000

- D. Systems air flow diagrams – See Appendix D

Attachment J

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WORK PRACTICE MANUAL

Appendix A

**SINTER HOOD
DECISION TREE USE**

SITUATION	ACTION STEP
Observe “Blue Haze”	Sinter Machine operator Adjust FA-6 & FA-7
Problem remains with FA-6 & FA-7 Adjustment 450 °F Dilution Damper opens in 10 x 14 trail	Sinter Machine operator *Shuts down FA-6 *Cuts back FA-5/FA-4 Dampers and contacts # 3 Baghouse /Acid Plant operator *Acid Plant/# 3 Baghouse operator confirms 2” Draft minimum Cells on line Need to shake bags Acid Plant/# 3 Baghouse operator checks % Acid Plant is running
# 3 Baghouse temperature reaches 475 °F	#6 & #7 fans shutdown at # 3 Baghouse

Attachment J

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WORK PRACTICE MANUAL

Appendix B

**EMISSIONS PREDICTOR PROFILE OPERATING PROCEDURES
SINTER PLANT/# 3 BAGHOUSE
WASTE GAS INLET TEMPERATURE TO # 3 BAGHOUSE**

SITUATION	ACTION STEP
Optimum operating range (up to 425 °F)	Only Sinter Plant area vented by # 3 Baghouse
Caution operating temperature range (425 °F – 450 °F) 450 °F Dilution Damper opens in 10' x 14' trail 450 °F indicated that temperature has moved towards potential problem situation	Sinter Plant Control Room Operator * increase monitoring frequency of inlet temperature * Notify Preparation Group Leader, if unavailable, Plant Coordinator * Red light will come on in the upper right hand corner of the circular chart instrument.
Reactive operating temperature range (450 °F) Temperature has moved into danger area	* Notify Sinter Plant Group Leader * Notify Plant Coordinator * Fan will automatically shutdown at 475 °F * A second red light will come on in the upper right hand corner of the circular chart instrument

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WORK PRACTICE MANUAL

Appendix C

**EMISSIONS PREDICTOR PROFILE OPERATING PROCEDURES
BLAST FURNACE/# 5 BAGHOUSE
WASTE GAS INLET TEMPERATURE TO # 5 BAGHOUSE**

SITUATION	ACTION STEP
Optimum operating range (up to 189 °F)	The acceptable operating range
Caution operating temperature range (190 °F – 224 °F) indicates warning that temperature has moved toward potential problem situation	# 5 Baghouse Operator * Increase monitoring frequency of inlet temperature * Notify Process Group Leader of temperature condition * Dilution air dampers will open (250 °F) * Verify open
Fan shut down range 275 °F (Above 265 °F) Temperature very close to point where Baghouse fans will automatically shut down To protect baghouse.	# 5 Baghouse Operator * Notify Process Group Leader * Notify Sinter Plant Group Leader * Notify Plant Coordinator * Fan will automatically shut down at 275 °F

Attachment J

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WORK PRACTICE MANUAL

Appendix C

**DUMPING TO TRESTLE BINS
DECISION TREE USE**

SITUATION	ACTION STEP
PERSONEL CHECKS COKE, SINTER, MIX BINS	OK DO NOT DUMP LOW * CHECK FLAG/STACK * HAVE TO DO ON DAY SHIFT * GOAL TO KEEP SUFFICIENT FEED IN BINS TO LAST THROUGH NIGHT
MIX SECONDARIES AND FLUXES WITH SINTER AS NEEDED	COORDINATE LOADING/MIXING BASED ON * WIND SPEED * WIND DIRECTION * PRECIPITATION * BLAST FURNACE NEEDS
COKE (APPROX. 3 CARS DAILY)	1 BLAST FURNACE CHOICE OF ONE OR TWO DAYS SUPPLY 2 BLAST FURNACES * MUST DUMP WITHIN 8 HOURS (DUMPER BEFORE SINTER)
SINTER * FROM SINTER PLANT..... * SINTER WET * # 9 BELT DOWN * FROM OUTSIDE OR * FROM STOCK	DUMP ALL DAY KEEP SUFFICIENT FEED IN THE BINS BASED ON FURNACE NEEDS

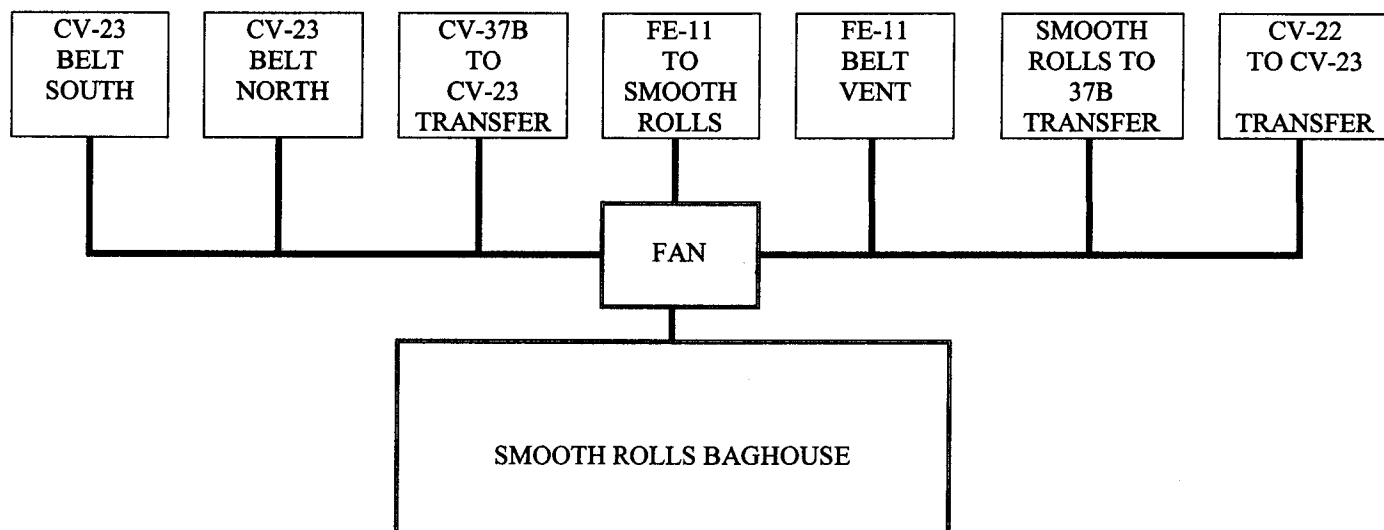
Attachment J

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WORK PRACTICE MANUAL

Appendix D

SMOOTH ROLLS BAGHOUSE



D-1

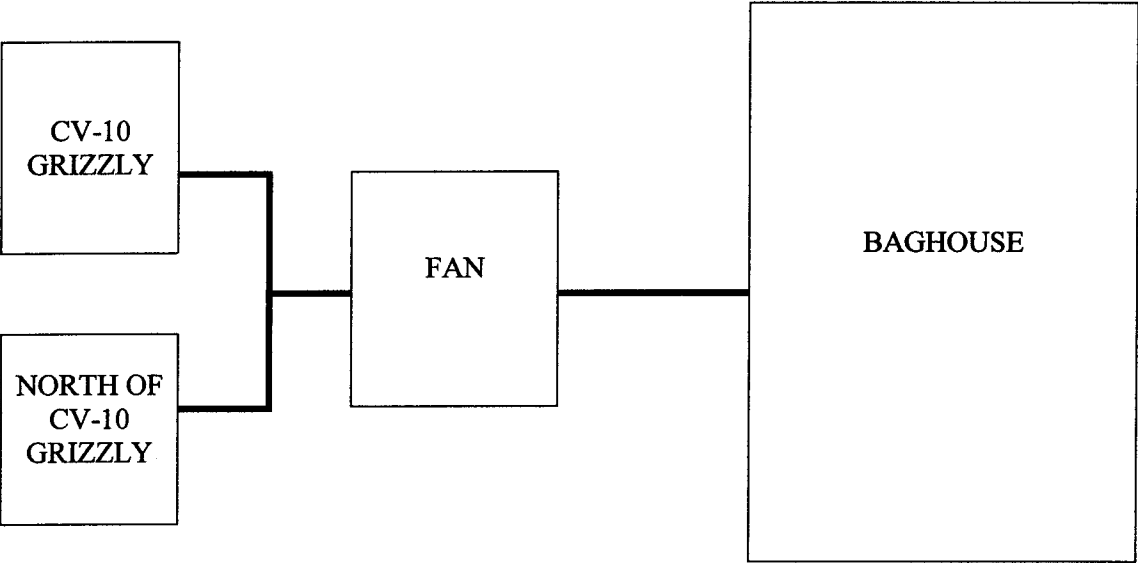
Attachment J

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Appendix D

CV-10 GRIZZLY



D-2

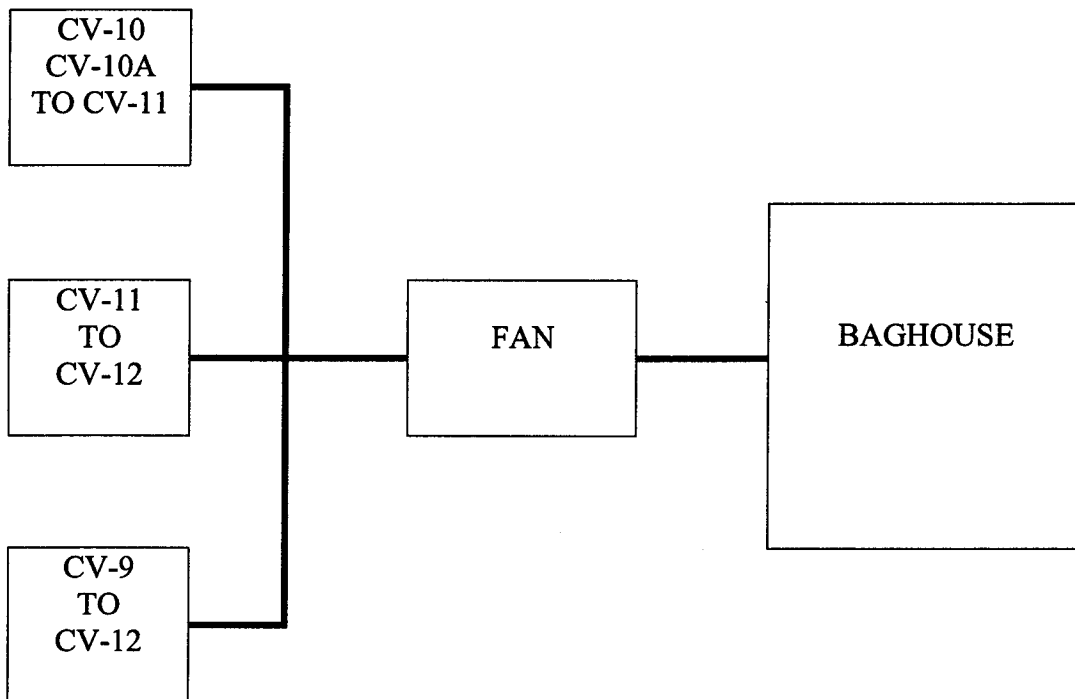
Attachment J

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Appendix D

CV-10 & CV-11 VENT



D-3

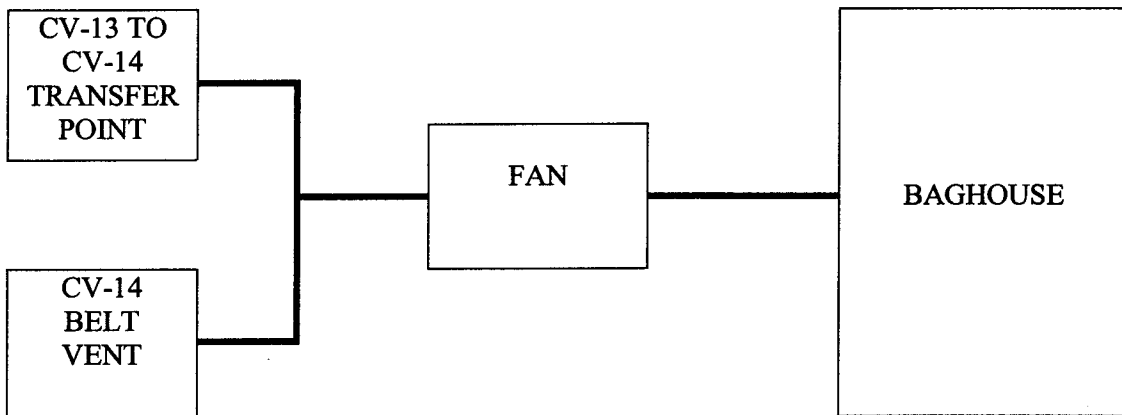
Attachment J

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Appendix D

CV-13 & CV-14 VENT



D-4

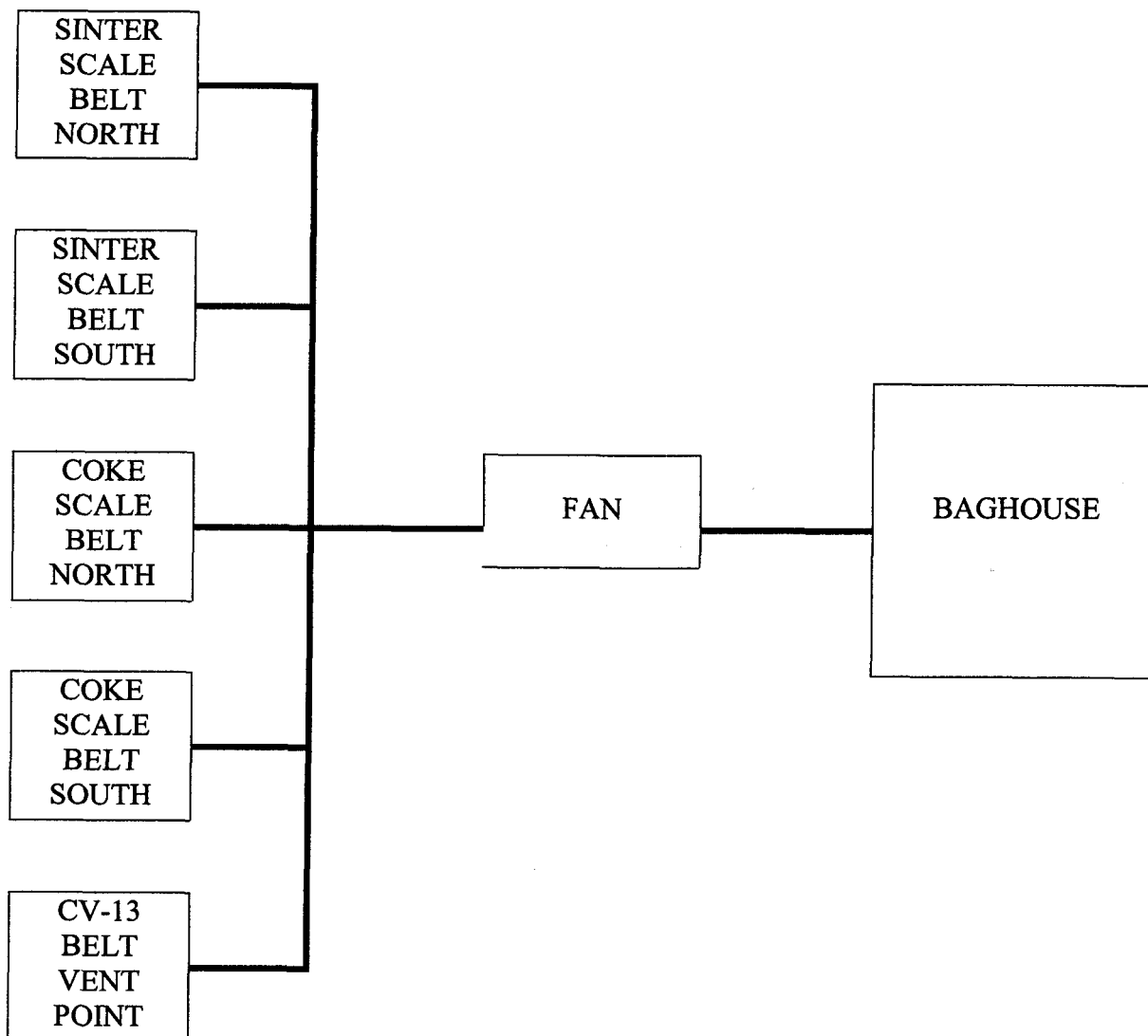
Attachment J

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WORK PRACTICE MANUAL

Appendix D

SCALE BELT VENT



D-5

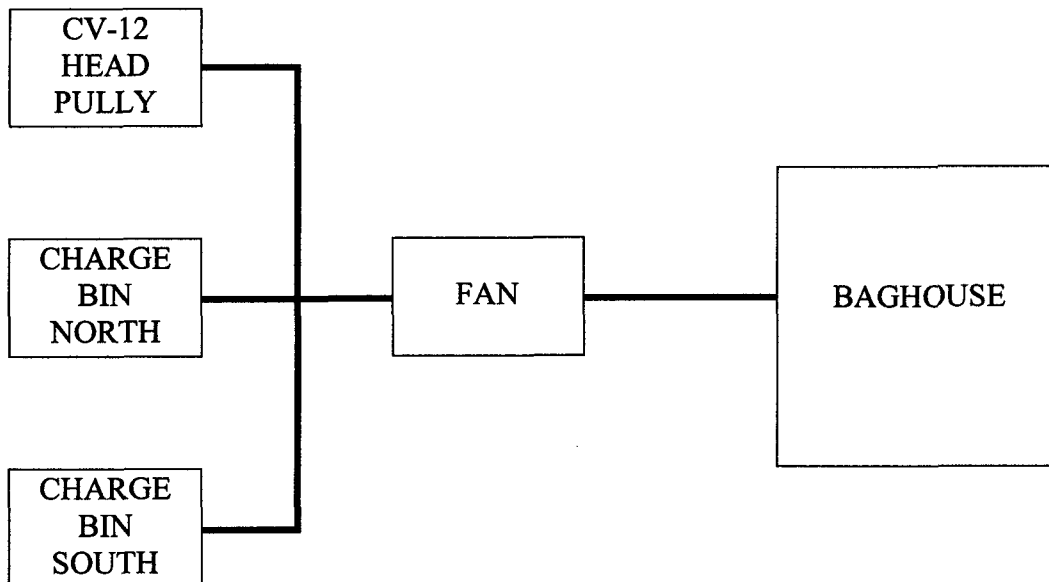
Attachment J

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Appendix D

CROW'S NEST VENTILATION



D-6

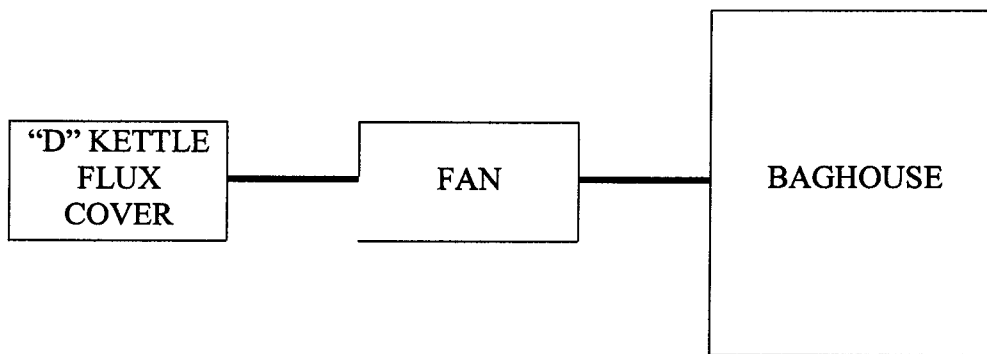
Attachment J

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Appendix D

“D” KETTLE FLUXING VENT



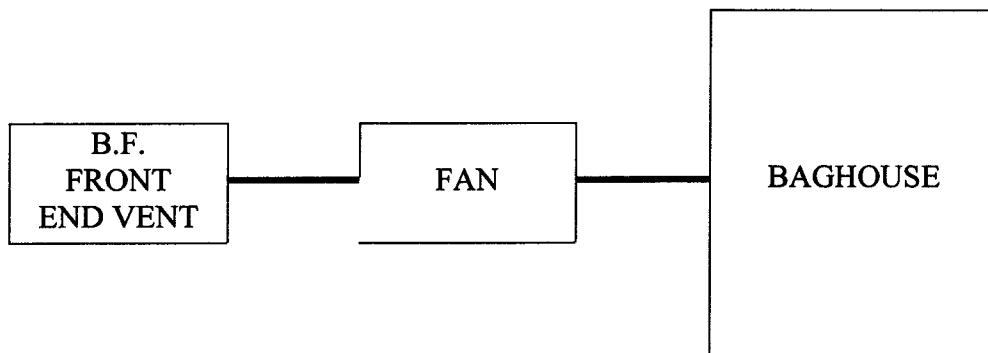
D-7

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Appendix D

BLAST FURNACE FRONT END VENT



D-8

Attachment J

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WORK PRACTICE MANUAL

Appendix G

BUILDING ENCLOSURE INSPECTION

Date _____

SIDING CONDITION	OK	NEED REPAIR	DESCRIPTION OF PROBLEM	CORRECTIVE ACTION	DATE W/O WRITTEN	DATE COMPLETED
DOORS						
DOOR #:						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

INSPECTED BY: _____

Attachment K

Monthly Lead Emission Tracking
Permit Condition EU0180-001

This sheet covers the period from _____ to _____ (Month, Day, Year)

Date Month Year	Monthly Silver Dross Processed (Tons)	Controlled Lead Emission Factor (lbs/ton)	Monthly Lead Emissions (Tons)	12 Months Rolling Total (Tons)	Date Month Year	Monthly Silver Dross Processed (Tons)	Controlled Lead Emission Factor (lbs/ton)	Monthly Lead Emissions (Tons)	12 Months Rolling Total (Tons)
		0.0000495					0.0000495		
		0.0000495					0.0000495		
		0.0000495					0.0000495		
		0.0000495					0.0000495		
		0.0000495					0.0000495		
		0.0000495					0.0000495		
		0.0000495					0.0000495		
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		0.0000495					0.0000495		
		0.0000495					0.0000495		
		0.0000495					0.0000495		
		0.0000495					0.0000495		
		0.0000495					0.0000495		

The monthly lead emissions (Tons) is calculated by multiplying the monthly silver dross processed (Tons) from the permit condition equipment by the controlled lead emission factor (ton/ton).

Sum of Lead in 12-Consecutive Months Rolling Total of 0.60 tons or less indicates compliance.

Attachment L

12-Month Lead Emission Tracking Permit Condition EU0190-001

This sheet covers the period from _____ to _____ (Month, Day, Year)

[illegible]

12-Month Running Total Lead Emissions less than 0.6 tons indicates compliance

Attachment M

10 CSR 10-5.300
Purchase Records for Cold Cleaning Solvent

[illegible]

Attachment N

Solvent Containing Waste Transfer Log

[illegible]

Attachment O

10 CSR 10-5.300
Inspection/Maintenance/Repair/Malfunction Log

[illegible]

Attachment P

Employee Solvent Metal Cleaning Training Log

[illegible]

STATEMENT OF BASIS

Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

- 1) Part 70 Operating Permit Application, received May 12, 1997; revised June 30, 2004
- 2) 2004 Emissions Inventory Questionnaire, received, April 1, 2005
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits

In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

10 CSR 10-6.180, *Measurement of Emissions of Air Contaminants*,

This rule has been included in the operating permit in order to provide citing for the allowance of requests for emissions data results. On past forms issued by the Air Pollution Control Program, including the application for this permit, it was automatically marked as an administrative rule not required to be listed as an applicable requirement. It is no longer judged to be solely administrative and is, therefore, included in the operating permit.

Other Air Regulations Determined Not to Apply to the Operating Permit

The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

10 CSR 10-5.180, *Emission of Visible Air Contaminants From Internal Combustion Engines*

This rule was marked as applicable in the operating permit application. However, the rule was rescinded November 30, 2002 and was not placed in the permit.

10 CSR 10-5.220, *Control of Petroleum Liquid Storage, Loading and Transfer*.

This rule is not applicable to the installation as the diesel oil tanks are less than 40,000 gallon capacity and the gasoline storage tank is less than 500 gallon capacity, therefore, it was not placed in the permit.

10 CSR 10-5.443, *Control of Gasoline Reid Vapor Pressure*

This rule was marked as applicable in the operating permit application. However, the rule was rescinded January 30, 2003 and was not placed in the permit.

10 CSR 10-5.455, *Control of Emission from Solvent Cleanup Operations*

This rule is not applicable to cold cleaners or to installations that emit less than 500 pounds of cleaning solvent VOCs per day. Therefore it was not placed in the permit.

10 CSR 10-5.510, *Control of Emissions of Nitrogen Oxides*

This rule is not applicable to the installation, as the potential to emit nitrogen oxides is less than 100 tons per year. Prior to 1999 NOx emissions were based on FIRE emission factors for combusting coke in boilers that indicated NOx emissions of hundreds of tons per year. A 1999 main stack test for NOx showed that the emissions of NOx from the sinter plant and blast furnaces were far less than the 100 ton minimum required for the rule. Therefore, the rule was not placed in the permit.

10 CSR 10-5.520, *Control of Volatile Organic Compound Emissions From Existing Major Sources*

This rule is not applicable because the installation does not have the potential to emit greater than 100 tons per year of volatile organic compounds. Therefore, the rule was not placed in the permit.

10 CSR 10-6.240, *Asbestos Abatement projects-Registration, Notification and performance Requirements*

This rule was marked as applicable in the operating permit application. However, the court has voided the rule and it has not been placed in the permit.

10 CSR 10-6.350, *Emission Limitations and Emissions Trading of Oxides of Nitrogen*

This rule is not applicable to the installation, as it applies to a fossil fuel-fired electric generating unit that serves a generator with a nameplate capacity of greater than 25 megawatts. The installation does not have an electric generating unit, therefore, the rule was not placed in the permit.

40 CFR part 60, subpart H, *Standards of Performance for Sulfuric Acid Plants*

This rule is not applicable to facilities where conversion to sulfuric acid by the contact process is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds. Therefore, the rule was not placed in the permit.

40 CFR part 60, subpart K, *Standards of Performance for Storage Vessels for Petroleum Liquids*

40 CFR part 60, subpart Ka, *Standards of Performance for Storage Vessels for Petroleum Liquids*

40 CFR part 60, subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)*

All of the petroleum liquid storage tanks at the installation are of less capacity than the minimum stated capacity of these rules. Therefore, none of the rules were placed in the permit.

40 CFR part 60, subpart L, *Standards of performance for Secondary Lead Smelters*

This rule is not applicable because the installation is a primary lead smelter engaged in the production of lead metal from sulfide ore concentrates through the use of pyrometallurgical techniques.

40 CFR part 60, Subpart LL, *Standards of Performance for Metallic Mineral Processing Plants*

This rule is not applicable because the installation does not produce metallic concentrates from ore.

Construction Permit Revisions

The following revisions were made to construction permits for this installation:

Permit No. 0386-006. This permit for the installation of an additional roll crusher and baghouse on the discharge end of the sinter plant contained no special conditions except that 40 CFR part 40, subpart R was applicable. Therefore, there was no need to assign the construction permit a permit condition in the operating permit. The specific conditions are covered under EU0080

Permit No. 1098-018. This permit did not apply 40 CFR part 60, subpart R to the low alpha process, which by definition in subpart R, is a converter. The process was tested for lead emissions in 1999, but has not been operated as a “converter” since. The permittee received permission in 2001, under project 2001-01-048, to use the equipment identified in EU0190 to up-grade silver dross. The 12-consecutive month total lead emissions limit of less than 0.6 tons of lead is still applicable. If the permittee wants to operate the equipment as a “converter” again, they must re-apply for a new construction permit with Subpart R conditions.

Permit No. 1198-004. This permit for the installation of a new pre-heater in the acid plant contained no special conditions. Therefore, there was no need to assign the construction permit a permit condition in the operating permit.

Permit No. 102000-028. This permit incorrectly applied 40 CFR part 60, subpart R to the two liquation kettles (EU0180) as explained in NSPS Applicability.

NSPS Applicability

40 CFR part 60, subpart R, *Standards of Performance for Primary Lead Smelters*

The provisions of this subpart apply to the sintering machine, sinter machine discharge end, blast furnace, dross reverberatory furnace, electric smelting furnace, and converter at primary lead smelters commencing construction or modification after October 16, 1974.

Sintering machine discharge end means any apparatus that receives sinter as it is discharged from the conveying grate of a sintering machine.

Dross reverberatory furnace means any furnace used for the removal or refining of impurities from lead bullion.

Electric smelting furnace means any furnace in which the heat necessary for smelting of the lead sulfide ore concentrate charge is generated by passing an electric current through a portion of the molten mass in the furnace.

Converter means any vessel to which lead concentrate or bullion is charged and refined.

The rule is applicable to EU0080, the sinter machine discharge end smooth roll crusher constructed in 1986, which must comply with the particulate matter and opacity conditions of the rule. The SO₂ conditions are not applicable to EU0080, as the solid sinter would emit none or minor amounts of SO₂.

This rule is not applicable to EU0140, strip mill kettles constructed in 1979, as they are remelting kettles charged with refined lead.

This rule is not applicable to EU0180, two liquation kettles constructed in 2000, as they are charged with silver dross.

This rule is not applicable to EU0190, an induction furnace, two kettles and two hoppers constructed in 1998, as they are used to upgrade silver dross.

MACT Applicability

40 CFR part 63, subpart TTT, *National Emission Standards for Hazardous Air Pollutants for Primary Lead Smelting*

The provisions of this subpart apply to the sinter machine, blast furnace, dross furnace, process fugitive sources, and fugitive dust sources at primary lead smelters.

The Fugitive Dust SOP manual required by §63.1544(a), and the Baghouse SOP manual required by §63.1547(a) were submitted to the APCP prior to November 6, 2000. The manuals were approved and are part of the Doe Run Primary Lead Smelter SIP that was approved by the MACC at the December 2000 meeting.

Compliance with the sinter building in-draft requirement of §63.1547(i) is accomplished by measuring and recording the in-draft at each doorway on a shift basis as stated in §63.1547(i)(1).

Compliance with the requirements of 40 CFR part 63, subpart TTT was completed with a successful stack test on April 27, 2001.

Permit Condition PW003 states, in part, that the lead compound emission rate for each source listed in §63.1543(a)(1) through §63.1543(a)(9) shall be determined. However, as all of the sources (EU0010 through EU0100) discharge to the atmosphere from the mainstack (EP059), one test covers the aggregation of emissions discharged from the control devices.

40 CFR part 63, subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Industrial/Commercial/Institutional Boilers and Process Heaters*

The small gaseous fuel boilers and process heaters at the installation are not subject to any requirements in 40 CFR part 63, subparts DDDDD or A. (§ 63.7506(c))

NESHAP Applicability

The installation is subject to 40 CFR Part 61, subpart M, *National Emission Standards for Asbestos*

CAM Applicability

40 CFR Part 64, Compliance Assurance Monitoring (CAM)

The CAM rule applies to each pollutant specific emission unit (PSEU) that meets all of the following:

- Be subject to an emission limitation or standard, and
- Use a control device to achieve compliance, and
- Have pre-control emissions that exceed or are equivalent to the major source threshold.

The requirements of Part 64 shall not apply to PSEU that are subject to the following:

Emission limitations or standards proposed by the EPA after November 15, 1990 pursuant to section 111 or 112 of the Clean Air Act.

CAM Rule § 64.5 Deadlines for submittals.

(a) *Large pollutant-specific emissions units.* The permittee of a major source shall submit the information required under § 64.4 at the following times:

- (1) On or after April 20, 1998, the permittee shall submit information as part of an application for an initial part 70 or part 71 permit if, by that date, the application either:
 - (i) Has not been filed; or
 - (ii) Has not yet been determined to be complete by the permitting authority.

The application for the Doe Run Herculanum smelter was filed May 12, 1997 and was determined to be complete on November 26, 1997. Therefore, the information required by 40 CFR part 64 is not required until permit renewal or the submittal of a significant permit revision, but then only with respect to those pollutant-specific emissions units for which the proposed permit revision is applicable.

Other Regulatory Determinations

CSR 10-6.120, Restriction of Emissions of Lead From Specific Lead Smelter-Refinery Installations

The original rule allowed lead emissions of 446.6 lbs/day from the main stack, and 27.6 lbs/day from three other stacks. After construction of a new main stack, reorganizing the existing dust collectors and installation of the Consent Judgement projects required as SIP control measures, lead emissions were reevaluated as described in the 2000 SIP and the lead inventory of March 30, 2000. Changes to the ventilation and emission collection systems reduced fugitive emissions and increased controlled emissions. This resulted in the change to the lead emission limits of this rule as listed in Permit Condition (EU0010 through EU0160)-001.

CSR 10-6.400, Restriction of Particulate Emissions From Industrial Processes

This rule is not applicable to the following emission units because at their maximum hourly design rates they have the potential to emit less than 0.5 pounds per hour of particulate matter; (10 CSR 10-6.400(1)(B)11.)

EU0080, EU0140, EU0150 and EU0160 while unloading concentrate, EU0180, EU0190 and EP054 the WWTP lime silo.

Lead SIP History

Consent Order for St. Joe Lead Company as part of the 1980 SIP for Lead

On October 5, 1978 the EPA promulgated a NAAQS for lead of 1.5 micrograms per cubic meter averaged over a calendar quarter. In response to this standard, Missouri prepared the 1980 lead SIP that included the area near the Herculanum smelter. The required emission control projects for Herculanum were:

1. Five additional sinter plant ventilation gas scrubbers for six conveyors and transfer points.
2. Conveyor covers for the six sinter plant conveyors.
3. Redesign and install hooding, ducting and exhaust equipment for ventilation of dross kettle D.
4. Install a transmissometer and alarm system on each of the three blast furnaces.
5. Install a new slag granulation water cooling tower.
6. New design and installation of hooding and enclosures at the blast furnace charge make-up and weighing floor with ventilation to two entrances to #5 baghouse trail system.
7. Install a transmissometer and alarm system for the #2 and #3 baghouse trail system.
8. Concrete paving of 133,000 sq. ft. of yard area.
9. Purchase an Ecolotec Vacu-Sweep.
10. Pave approximately 285,000 sq. ft. of parking area with asphalt.

Air monitoring continued to show that the area within the city limits of Herculanum was nonattainment for lead and the SIP was revised in 1993. The revised plan required building air – filtering systems, enclose buildings, and improve material handling. It also required implementation of additional controls if the NAAQS was not met. Since air monitoring showed continued violations of the lead standard the contingency measures of the 1993 SIP were implemented. Page 3 of the 2000 SIP revision lists the many 1993 contingency emission controls implemented .

Consent Judgement Projects Required as 2000 SIP Control Measures:

1. Refinery Department Modifications. Completed by July 31, 2001. (§2.A.1.) Notification sent 8/22/01.
 - (a) Doe Run installed a permanent total enclosure of the Refinery Building to minimize the escape of uncontrolled air and lead-bearing particles. The roof monitor and the two roof ventilation fans were removed. The Work Practice Manual describes the procedure for keeping the building doors closed, except to allow for entering and exiting the building
 - (b) A new ventilation system for kettles 9 through 11 was installed. New baghouse No. 8 with Teflon membrane bags was installed to service the kettle surface ventilation gases of kettles 0 through 3, 9 through 11, and the CV-10 conveyor area. The system was designed with a ventilation rate of 80,000 scfm, and the baghouse gases are routed to a 100-foot stack. The rate of ventilation is continuously monitored at a point immediately before the gases enter No. 8 baghouse.
 - (c) The Refinery Building was ventilated by new baghouse No. 9 with Teflon membrane bags to control fugitive emissions of lead from the building by maintaining an in-draft at all Refinery Building openings under normal operating conditions. The system was

- designed with a ventilation rate of 250,000 scfm and the baghouse gases are routed to a 100-foot stack. The rate of ventilation is continuously monitored at a point immediately before the gases enter No. 9 baghouse.
- (d) Triboflow continuous particulate monitors were installed to monitor the exhaust gases of No. 8 and No. 9 baghouses.
2. Dross Plant and Refinery Dross System. Completed by July 31, 2001. (§2.A.2.)
Notification sent 8/22/01.
- (a) A new dross handling system was installed to minimize the handling of dross materials. The dross is water quenched and then screw conveyed to a holding hopper prior to the conveyor belt transfer system.
3. Blast Furnace and Dross Plant Projects. Completed by July 31, 2002 (§2.A.3.)
Notification sent 8/2/02.
- (a) Doe Run installed a permanent total enclosure of the Blast Furnace and Dross Building to minimize the escape of uncontrolled air and lead-bearing particles. Roof vents and roof ventilation fans were removed. The individual feed floors and the furnace feed floor were isolated from each other by the construction of permanent walls and doors. The work practices manual outlines the procedure for keeping the building doors closed, except for entering and exiting the building.
- (b) The CV-14 conveyor belt area was enclosed. A new No. 7 baghouse with Teflon membrane filter bags was installed to ventilate the Blast Furnace and Dross Plant Buildings and maintain an in-draft at all building openings under normal operating conditions. The system was designed with a ventilation rate of 250,000 scfm and the baghouse gases are routed to a 100-foot stack. The rates of ventilation are continuously monitored at a point immediately before the gases from the CV-14 conveyor area and Dross Plant roof areas combine.
- (c) The No. 6 baghouse continues to ventilate the CV-14 conveyors and the ventilation rate is continuously measured at a point immediately before the gases enter the No. 6 baghouse.
4. Upon state adoption of 40 CFR part 63, subpart TTT, all references in the Judgement to the subpart are replaced with the state regulation that incorporates the federal regulation by reference, specifically, 10 CSR 10-6.075(4)(TTT).
5. Existing Road Dust Controls (§2.A.5.)
- (a) The installation has continued to wash roadways with fire- hoses in the plant according to procedures outlined in the Work Practice Manual.

ORDER TO ABATE AND CEASE AND DESIST VIOLATIONS

On August 21, 2001, MDNR personnel responding to citizens' complaints related to dust on the streets of Herculaneum collected and analyzed a sample of road dust. The analysis indicated that the dust was lead concentrate and was probably dropped from trucks hauling the concentrate from the mills at the mines to the smelter. Additional testing by the EPA and the MDNR on

August 30, 2001, found high lead content dust primarily along hauling routes approximately 50 yards down intersecting side streets.

On August 31, 2001 Doe Run was notified to immediately take action to clean the hauling routes and facilities that may contribute to dispersal of hazardous substances. On September 17, 2001 fugitive dust was observed blowing from the south side of the plant onto city property. NOV #6313 was issued for this violation. Doe Run was notified that Section XXV of the Administrative Order on Consent was invoked and that expedited assessment of residential yards, play areas and high-child use areas for lead was required as well as remediation of residential yards where children with elevated blood levels reside.

The Order to Abate and Cease and Desist Violations required Doe Run to cease activities that cause fugitive dust to leave the property. All trucks and other vehicles leaving the property were to be inspected to insure that they were free of lead concentrate and slag dust. The current truck washing procedures were to be expanded to include bed washing of concentrate trucks and wheel and under-carriage washing of all vehicles leaving the plant area and traveling on public streets. Procedures were to be put in place to insure cleaned vehicles did not travel through contamination

SETTLEMENT AGREEMENT

On April 26, 2002 the State of Missouri, MDNR and Doe Run agreed to the making of the Settlement Agreement as a resolution of all claims arising out of the Order of September 25, 2001. The Settlement Agreement supercedes the Order, and the parties agree that the obligations contained therein are satisfied by this Settlement Agreement.

1. In any event, Doe Run shall pay a civil penalty in the amount of one million dollars (\$1,000,000). The one million dollars civil penalty is hereby suspended on the condition that Doe Run successfully complies with the provisions in paragraphs 20 – 22 of the Settlement Agreement.
2. Paragraphs 20 –22 cover the Herculaneum Voluntary Property Purchase Plan
3. Other paragraphs of the Settlement Agreement cover a Transportation and Materials Handling Plan

Calculations

10 CSR 10-6.400

EU0010, CV-21/CV-22 transfer, MHDR = 135 ton/hr, Limit = $55 \times 135^{0.11} - 40 = 54.3$ lb PM/hr
Conc. = 0.10 gr PM/dscf, Flow = 3,110 dscfm,
PM emissions = $(0.010 \text{ gr/dscf} \times 3110 \text{ dscfm} \times 60 \text{ min/hr}) / 7000 \text{ gr/lb} = 2.67$ lb PM/hr

EU0020 Cage Paktor, Returns Bin, MHDR = 405 ton/hr, Limit = $55 \times 405^{0.11} - 40 = 66.5$ lb PM/hr
Conc. = 0.071 gr PM/dscf, Flow = 31695 dscfm

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- PM emissions = $(0.071 \text{ gr/dscf} \times 31,695 \text{ dscfm} \times 60 \text{ min/hr}) / 7000 \text{ gr/lb} = 19.3 \text{ lb PM/hr}$
- EU0030, Mix Drum & CV-24/CV-24 transfer, MHDR = 540 ton/hr, Limit = $55 \times 540^{0.11} - 40 = 69.9 \text{ lb PM/hr}$
Conc. = 0.089 gr PM/dscf, Flow = 19810 dscfm
PM emissions = $(0.089 \text{ gr/dscf} \times 19,810 \text{ dscfm} \times 60 \text{ min/hr}) / 7000 \text{ gr/lb} = 15.1 \text{ lb PM/hr}$
- EU0040 Sinter Plant, Claw Breaker & CV39, MHDR = 270 ton/hr, Limit = $55 \times 270^{0.11} - 40 = 61.8 \text{ lb PM/hr}$
Conc. = 0.03 gr PM/dscf, Flow = 204,464 dscfm
PM emissions = $(0.03 \text{ gr/dscf} \times 204,464 \text{ dscfm} \times 60 \text{ min/hr}) / 7000 \text{ gr/lb} = 52.6 \text{ lb PM/hr}$
- EU0050, Sinter Crush & Screen, MHDR = 270 ton/hr, Limit = $55 \times 270^{0.11} - 40 = 61.8 \text{ lb PM/hr}$
Conc. = 0.057 gr PM/dscf, Flow = 23,592 dscfm
PM emissions = $0.057 \text{ gr/dscf} \times 23,592 \text{ dscfm} \times 60 \text{ min/hr} / 7000 \text{ gr/lb} = 11.5 \text{ lb PM/hr}$
- EU0060, Carrier Cooler, MHDR = 135 ton/hr, Limit = $55 \times 135^{0.11} - 40 = 54.3 \text{ lb PM/hr}$
Conc. = 0.0452 gr PM/dscf, Flow = 85,194 dscfm
PM emissions = $0.0452 \text{ gr/dscf} \times 85,194 \text{ dscfm} \times 60 \text{ min/hr} / 7000 \text{ gr/lb} = 33.0 \text{ lb PM/hr}$
- EU0070, #10 Bin, MHDR = 50 ton/hr, Limit = $55 \times 50^{0.11} - 40 = 44.6 \text{ lb PM/hr}$
Conc. = 0.10 gr PM/dscf, Flow = 1859 dscfm
PM emissions = $0.10 \text{ gr/dscf} \times 1,859 \text{ dscfm} \times 60 \text{ min/hr} / 7000 \text{ gr/lb} = 1.58 \text{ lb PM/hr}$
- EU0080, Smooth Rolls, MHDR = 135 ton/hr, Limit = $55 \times 135^{0.11} - 40 = 54.3 \text{ lb PM/hr}$
Conc. = 0.0025 gr PM/dscf, Flow = 14,467 dscfm
PM emissions = $0.0025 \text{ gr PM/dscf} \times 14,467 \text{ dscfm} \times 60 \text{ min/hr} / 7000 \text{ gr/lb} = 0.31 \text{ lb PM/hr}$
- EU0090, Blast Charge Belts, MHDR = 73 ton/hr, Limit = $55 \times 73^{0.11} - 40 = 48.2 \text{ lb PM/hr}$
Conc. = 0.045 gr PM/dscf, Flow = 77,157 dscfm
PM emissions = $0.045 \text{ gr/dscf} \times 77,157 \text{ dscfm} \times 60 \text{ min/hr} / 7000 \text{ gr/lb} = 29.8 \text{ lb PM/hr}$
- EU0100, Blast Furnaces and Drossing, MHDR = 222.6 ton/hr, Limit = $55 \times 222.6^{0.11} - 40 = 59.7 \text{ lb PM/hr}$
Conc. = 0.0125 gr PM/dscf, Flow = 405682 scfm
PM emissions = $0.0125 \text{ gr/dscf} \times 405,682 \text{ dscfm} \times 60 \text{ min/hr} / 7000 \text{ gr/lb} = 43.5 \text{ lb PM/hr}$
- EU0110, Blast Furnace & Dross Building, MHDR = 50 ton/hr, Limit = $55 \times 50^{0.11} - 40 = 44.6 \text{ lb PM/hr}$
Conc. = 0.00352 gr PM/dscf, Flow = 303,163 dscfm

PM emissions = $0.00352 \text{ gr/dscf} \times 303,163 \text{ dscfm} \times 60 \text{ min/hr} / 7000 \text{ gr/lb} = 9.15 \text{ lb PM/hr}$

EU0120, Refinery Kettles and #1 Trestle Sinter Transfer to CV-10, MHDR = 263 ton/hr, Limit = $55 \times 263^{0.11} - 40 = 61.5 \text{ lb PM/hr}$
Conc = 0.002818 gr/dscf , Flow = 82,100 cscfm
PM emissions = $0.002818 \text{ gr/dscf} \times 82,100 \text{ dscfm} \times 60 \text{ min/hr} / 7000 \text{ gr/lb} = 1.983 \text{ lb PM/hr}$

EU0130, Refinery Building, MHDR = 163 ton hr, Limit = $55 \times 163^{0.11} - 40 = 56.3 \text{ lb PM/hr}$
Conc. = 0.00243 gr/dscf , Flow = 243,702 dscfm
PM emissions = $0.00243 \text{ gr/dscf} \times 243,702 \text{ dscfm} \times 60 \text{ min/hr} / 7000 \text{ gr/lb} = 5.076 \text{ lb PM/hr}$

EU0140, Strip Mill, MHDR = 10 ton/hr, Limit = $4.1 \times 10^{0.67} = 19.2 \text{ lbs PM/hr}$
PM Emissions = $10 \text{ ton/hr} \times 0.009444 \text{ lb/ton controlled} = 0.094 \text{ lb PM/hr}$

EU0150 and EU0160 when unloading lead concentrate, Limit = $55 \times 180^{0.11} - 40 = 57.4 \text{ lb PM/hr}$
Pb emissions = $74 \text{ gm Pb/100 ton concentrate} @ 78\% \text{ Pb}$, therefore PM = $74 \text{ gm} / [100 \text{ ton} \times 453.6 \text{ gm/lb} \times 0.78] = 0.0021 \text{ lb PM/ton}$

MHDR = 180 ton/hr, $EF_{\text{CONC.}} = 0.0021 \text{ lb PM/ton}$, B/H Eff = 89.1%
PM emissions = $180 \text{ ton/hr} \times 0.0021 \text{ lb PM/ton} \times (1 - 0.891) = 0.0412 \text{ lb PM/hr}$

EU0150 Conc. = $0.0412 \text{ lb PM/hr} \times 7000 \text{ gr/lb} / 5,000 \text{ scfm} \times 60 \text{ min/hr} = 0.001 \text{ gr PM/scf}$
EU0160 Conc. = $0.0412 \text{ lb PM/hr} \times 7000 \text{ gr/lb} / 4000 \text{ scfm} \times 60 \text{ min/hr} = 0.0012 \text{ gr PM/scf}$

EU0150 and EU0160 when unloading coke, Limit = $55 \times 180^{0.11} - 40 = 57.4 \text{ lb PM/hr}$
EU0150: MHDR = 180 ton/hr, $EF_{\text{COKE}} = 0.042 \text{ lb PM/ton}$, B/H Eff = 89.1%, Stack Flow = 5,000 scfm
PM emissions = $180 \text{ ton/hr} \times 0.042 \text{ lb PM/ton} \times (1 - 0.891) = 0.82 \text{ lb PM/hr}$
Concentration = $[0.82 \text{ lb PM/hr} \times 7000 \text{ gr/lb}] / [60 \text{ min/hr} \times 5000 \text{ scfm}] = 0.019 \text{ gr PM/scf}$

EU0160: MHDR = 180 ton/hr, $EF_{\text{COKE}} = 0.028 \text{ lb PM/ton}$, B/H Eff = 89.1%, Stack Flow = 4,000 scfm
PM emissions = $180 \text{ ton/hr} \times 0.028 \text{ lb PM/ton} \times (1 - 0.891) = 0.55 \text{ lb PM/hr}$
Concentration = $[0.55 \text{ lb PM/hr} \times 7000 \text{ gr/lb}] / [60 \text{ min/hr} \times 4000 \text{ scfm}] = 0.016 \text{ gr PM/scf}$

EU0180 Silver Dross Process, MHDR = 0.84 ton/hr, EF = 0.87 lb PM/ton, Control Eff = 85.5%
PM emissions = $0.84 \text{ ton/hr} \times 0.87 \text{ lb PM/ton} \times (1 - 0.855) = 0.106 \text{ lb PM/hr}$

EU0190 Silver Dross Upgrading process – MHDR = 0.189 ton/hr, Limit = $4.1 \times 0.189^{0.67} = 1.34 \text{ lb PM/hr}$
PM Emissions = $0.189 \text{ ton/hr} \times 0.0358 \text{ lb/ton controlled} = 0.0068 \text{ lb PM/hr}$

EP054 Lime Silo, MHDR = 7.5 ton/hr, EF = 0.072 lb PM/hr, Eff. = 90%
PM Emissions = 7.5 ton/hr x 0.072 lb PM/ton x (1 – 0.9) = 0.054 lb PM/hr

10 CSR 10-5.030

EU0200, Exist. Sources = 73.40 MMBtu/hr Allowed PM rate = $1.09 \times 73.40^{-0.259} = 0.36$ lb PM/MMBtu

EU0210, New Sources = 33.18 MMBtu/hr

Total Q = 106.58 MMBtu/hr Allowed PM rate = $0.80 \times 106.58^{-0.301} = 0.20$ lb PM/MMBtu

AP-42 PM emission factor for natural gas = 7.6 lb PM/MMCF, Heating Value = 1050 MMBtu/MMCF

PM emissions from combusting natural gas = 7.6 lb PM/1050 MMBtu = 0.00724 lb PM/MMBtu
Therefore all existing and new indirect heating sources are in compliance with the regulation.

Test Results

10 CSR 10-6.120

Source	Main Stack	B/H 7 & 9	B/H 8
Limit, lb Pb/24 hr	794	56.6	8.2
Test 12/09/04	170.4		
Test 12/10/03	114.9		
Test 1/28/03	413.9		
Test 12/05/02		46.5	5.1
Test 4/02	553		
Test 4/27/01	113.3		

10 CSR 10-6.260

Plant Wide Limit = 20,000 lbs SO₂/hr; Stack Test 12/09/04 SO₂ emissions = 10,982 lbs/hr

40 CFR part 63, subpart TTT

Test Date	Result, gms Pb/ tonne Pb produced	Limit, gms Pb/ tonne Pb produced
12/09/04	180.9	500
12/10/03	131.5	500
1/28/03	473	500
04/02	568 *	500
4/27/01	84.5	500

* NOV issued.

40 CFR part 60, subpart R

Source	PM limit	Result Gr/dscf	COMS Opacity Limit	Result
Sinter Plant Smooth Rolls	0.022 gr/dscf	Test 11/20/86 0.0025 gr/dscf	20 %	Quarterly Reports <20%

Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis

Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

1. The specific pollutant regulated by that rule is not emitted by the installation;
2. The installation is not in the source category regulated by that rule;
3. The installation is not in the county or specific area that is regulated under the authority of that rule;
4. The installation does not contain the type of emission unit which is regulated by that rule;
5. The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the APCP's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation, which was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).

Prepared by:

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